Mapping the contemporary esports ecosystem

A thesis submitted for the degree of Masters by Research (MbR)

by

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Declaration

Candidate's declarations:

I, Mo Jia, hereby certify that this thesis submitted in partial fulfilment of the requirements for the award of Masters by Research (MbR), Abertay University, is wholly my own work unless otherwise referenced or acknowledged. This work has not been submitted for any other qualification at any other academic institution.

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Certificate of Approval

I certify that this is a true and accurate version of the thesis approved by the examiners, and that all relevant ordinance regulations have been fulfilled.

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Abstract

Electronic sports (esports) appeared in the public eye around 20 years ago. As a newly emerged industry, it has developed rapidly in the recent decades. This study aimed to: (1) explore key stakeholders of the contemporary esports industry, (2) explore real situations of operation and cooperation in the esports industry and (3) discover an updated and inclusive map of the esports industry ecosystem. This novel study used document analysis and in-depth semi-structured interviews to collect detailed information on the esports industry. The interviews focused on operations of the contemporary esports industry, especially one main component of the industry: esports competitions. Three participants who work in the esports industry participated in the interviews and produced a series of data relevant to the esports industry: general information on the esports industry, especially from the aspects of esports clubs and tournament organisers, and detailed information on organising formal esports tournaments and the cooperation between the stakeholders. The researcher identified seven key stakeholders of the esports industry and explored how each element operates with each other in the real world. The researcher also gathered a series of important information on how the esports industry works in reality and developed a map of the esports industry ecosystem. This study provides a clearer overview of the evolution of the esports ecosystem, which fills the research gap of current esports studies to a certain extent.

Key words: esports industry ecosystem; operation of the esports industry

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Defining terms

RTS

Real-time Strategy video games (RTS) are one kind of strategy video game, in which all processes of the game are based on real-time instead of being turn-based. Normally, players must position and transfer their own units and construction under their control to secure zones of the map and/or destroy their enemies' base and assets. A typical real-time strategy game should contain these processes:

- Use specialised units to collect resources (funds) and build bases;
- Use the collected resources for unit production, base construction or developing technology;
- Investigate to find more resources and the enemy's location; destroy enemies and/or their buildings.

Real-time Strategy video games focus on the use of strategy and tactics. Players must manage various units and use different tactics to attack their opponents. In the esports context, the popular RTS games are 'StarCraft', 'StarCraft II' and 'Warcraft', all of which Blizzard Entertainment designed and published.

MOBA

Multiplayer Online Battle Arena (MOBA), also called action real-time strategy (ARTS), came from RTS games. In such games, players must make decisions and perform actions in real time. Normally, the players are separated into two teams, with each player on a team controlling a single character, and each team trying to destroy the enemy team's base to achieve victory. The most popular esports MOBA games of the last five years are 'Dota 2' and 'League of Legends'.

FPS

First-person Shooter video games (FPS) are a game genre that uses the player's first-person perspective as the main gaming perspective. Normally, the

players must fight using guns or other weapons. A player will directly observe the surrounding environment from the perspective of the character in the game and perform shooting, moving, chatting and other activities. As one type of the most popular video games, FPS games accounted for more than 25% of total USA video-game sales in 2017 (Statista, 2017). In the context of esports, the popular FPS games are ‘Counter-Strike: Global Offensive’, ‘Call of Duty’ and ‘Overwatch’.

CCG

The Collectible Card Game (CCG), also called the Trading Card Game (TCG), was created in 1993. It is a strategy card game that consists of specially designed sets of playing cards. At the beginning, the cards were only for collecting, but then they developed into items for both collecting and playing. The cards use different artwork and images that may depict anything from fantasy or horror or science-fiction categories to cartoons or even sports. Each card shows its own description and is used to interact strategically with other cards in a strategic way. In the game, each player (normally, two or more players compete with each other) can build up the deck freely or make changes and combine the cards according to different rules. Each player builds a set of cards, normally called a ‘card group’ or a ‘deck’. In principle, the individual owns the deck, and the cards or decks of different holders cannot be mixed during the game. One CCG game usually has more than 100 different cards as a ‘Starter Pack’, and more cards will be sold later as different expansion packs called ‘Booster Packs’. The cards in an expansion pack would increase the range of the original deck and would also help the players to increase the strength of their respective decks. Furthermore, the cards have been rated at different levels of ‘rarity’. The cards that have a basic effect on the game are normally low in rarity, and the cards with strong or complex effects have a high-rarity value. The expansion pack and the rarity setting motivate the players to keep buying new cards to expand their collection and to strengthen their deck to defeat the opponent. ‘Magic: The Gathering’, one of the most representative CCG games, sold over 20 billion cards between 2008 and 2016 (Magic: The Gathering, no date).

DCCG

At the beginning, Digital Collectible Card Games (DCCG) were replications of their physical counterpart CCG. They became a special digital version of CCG and abandoned the physical-cards aspect. In the esports context, ‘Hearthstone: Heroes of Warcraft’ is the representative game of DCCG.

Nintendo

Nintendo is one of the biggest video-game companies around the world. It is a Japanese company that focuses on the production of family and handheld game consoles, such as Family Computer (FC), Wii, Gameboy and 3DS, and develops and publishes large numbers of video games. Famous games designed by Nintendo include the ‘Super Mario’, ‘Pokémon’ and ‘The Legend of Zelda’ series. Since Family Computer’s release, as of 10 November 2018, Nintendo’s worldwide sales in dedicated video-game software amounted to more than 4.6 billion units, and sales of hardware to more than 0.73 billion units (Nintendo, 2018).

Sony Interactive Entertainment (SIE)

Sony Interactive Entertainment is a subsidiary of the Japanese conglomerate Sony Corporation. SIE is a multinational video-game and digital-entertainment company that produced and published one of the most famous family game console series, PlayStation. As of August 2018, the total worldwide sales of PlayStation was more than 525 million units (Lempel, 2018). Besides, according to the ‘Subscription Services: Transforming Game Monetization’ report by SuperData (2018), PlayStation earned $143 million in 2018 (as of that report’s publication), the most of any game subscription service.

Riot Games, Inc (Riot)

Riot is an American company and one of the biggest game developers and publishers in the esports area. In 2015, the conglomerate Tencent bought Riot but agreed to operate it like an independent company. Riot’s representative work is ‘League of Legends’. That game gained for Riot a great number of fans and players, who helped the company build a big league of its esports objects.

In 2017, League of Legends alone brought Riot $2.1 billion in revenue (Statista, 2018a). By 2018, Riot had set the game servers in 13 regions around the world, covering Asia, Europe, North America and Oceania.

Blizzard Entertainment

Blizzard Entertainment is a subsidiary of American video-game holding company Activision Blizzard, Inc. In 2009, Activision Blizzard became the second biggest game company around the world, surpassed only by Nintendo. Blizzard Entertainment is a premier developer and publisher of entertainment software. Most of Blizzard's video games have received wide acclaim from players. In the esports area, Blizzard has different tournaments and games from which players can choose, such as MOBA ('Heroes of the Storm'), RTS + FPS ('Overwatch'), and DCCG ('Hearthstone: Heroes of Warcraft'). Each game has its own relevant tournaments and league.

Valve Corporation (Valve)

Valve Corporation is an American video-game developer, publisher and digital distribution company. In addition to video games, Valve also develops and operates a famous software-distribution platform called 'Steam'. In August 2017, Valve stated that 'Steam' had reached over 67 million active users monthly and 33 million daily on the platform. As of August 2018, 'Steam' supported more than 45,000 software products, including complete games, game demos, the game DLC (Downloadable Content) and other software. In the esports area, the 'Counter-Strike' series and 'Dota 2' are two representative Valve games. Both games provide series of tournaments with considerable prize money.

Dota 2

'Dota 2' is a MOBA game that Valve designed and published in 2013. It is the extension of 'Defence of the Ancients' (DOTA), which was a modification for 'Warcraft III: The Frozen Throne'. This game sets two teams, each with five players, and each player can choose to control one of 124 different champions (as of November 2018) as their representor in the game. Each team's aim is to win by being first to destroy a huge construction situated in the opposing team's base, called the 'Ancient'. Besides this main mode, 'Dota 2' also supports its

players in building their own mode to play (i.e. the players can design a different map and play a different mode of the game), which is the unique characteristic of this game.

League of Legends

'League of Legends' is a MOBA game that Riot designed and published in 2007. The play mode was rather similar to 'Defence of the Ancients' (DOTA), because the main designer of 'League of Legends' was one of the original designer-team members of DOTA. There are three maps for 'League of Legends'; the main one, called Summoner's Rift, is also the only esports competition map for 'League of Legends'. In this mode, two teams of five players each must destroy the enemy's Nexus, in their base and guarded by the enemy team, and a series of defensive structures called turrets (or towers) from three lanes (top, mid and bottom lanes) to achieve victory. Each player can choose to control one of 141 different champions (as of November 2018) as their representor in the game. There are two main 'League of Legends' play modes besides Summoner's Rift, called Twisted Treeline (three players versus three players mode) and Howling Abyss (five players versus five players mode, but with only a mid lane, and all champions the players can control are randomly selected by the system/AI). However, 'League of Legends' does not have the 'Dota 2' free editing map function.

StarCraft and StarCraft II

'StarCraft' is a famous RTS game designed and published by Blizzard Entertainment. Released in 1998, it won the award for bestselling PC game of 1998, and as of 2008, it had sold more than 9.5 million copies worldwide (Blizzard Entertainment, 2008). The game describes the story of three intelligent species (Terrans, Zerg and Protoss) fighting for dominance of Koprulu Sector in the galaxy during Earth's 25th century. The players play the game on a specific game map, where they must collect resources to build the base, produce various units and control their army to attack, eventually to win by destroying all the opponent's buildings. Each race has unique units, technologies, attributes and abilities. Blizzard also offered a special signal-player campaign that presents players with the heroic characters and sci-fi setting of the StarCraft

universe. Players also can create their own maps and units with the fully featured Campaign Editor, and quickly join the multiplayer play through Battle.net.

StarCraft is a preeminent example of RTS games, due to the nearly perfect balance among three races. Although each race has its unique units and abilities, no race has an innate advantage, and players must understand the varying performance of every unit and use various tactics to win.

In 2010, Blizzard Entertainment released ‘StarCraft II’, which continued the story of ‘StarCraft’.

Counter-Strike: Global Offensive

‘Counter-Strike: Global Offensive’ (CS: GO) is a tactical multiplayer FPS video game developed by Valve Corporation and Hidden Path Entertainment in 2012. In the game, the players are separated into two opposing teams, Terrorists and Counter Terrorists. They must compete to kill all players in the hostile camp or complete their own mission in a limited time. For example, the counter terrorists have missions, such as saving hostages from the terrorists and bringing them to a designated safe place; and the terrorists have missions, such as setting a bomb at a designated place and preventing the counter terrorists from demolishing the bomb. All players can buy their weapons at the beginning of one round; when the players have been killed, they will observe the game from a third-person perspective, and they will be alive again in the next round. A player who kills the enemy gets a game-money reward, and the winner of each round will have more reward money than the losing side. Also, the player who killed a teammate or a hostage will receive a punishment, such as money deducted.

Overwatch

‘Overwatch’ (OW) is a multiplayer FPS video game developed and published by Blizzard Entertainment in 2016. Normally, the game sets six players against six players. Other numbers of players can compete, such as three versus three or one versus one. With a series of background stories, each player can choose one of 29 different heroes (as of November 2018) to play in the game (in regular play mode, players cannot choose the same champions), and they can select

different heroes during the match after they lose one life. The heroes have been set into three character types: damage heroes (who focus on dealing damage to opponents), support heroes (who normally are good at healing and help their teammates) and tank heroes (who normally have high HP (health points) and the ability to protect their teammates). Each hero has its own skills set and feature numbers, such as health points and running speed. OW has a regular mode and an irregular mode. In regular mode, players can choose quick match play or competitive ranked play. In the match, one of four different missions will be set as the winning goal. In Escort, one team needs to transport the target vehicle to a certain place within the specified time, and the opponent team must obstruct it. In Control, two teams must fight to secure control of points on the map, and the team that gets two points first wins the match. In Assault, one team must occupy a target point on the map that the opponent team protects. In Hybrid, one team must occupy the target vehicle that the opponent team protects on the map and then deliver the vehicle to the designated location within the specified time. All maps of the game are inspired by real-world places, such as Japan, Egypt, and China.

Hearthstone: Heroes of Warcraft

‘Hearthstone: Heroes of Warcraft’ (Hearthstone) is a free-to-play DCCG developed and published by Blizzard Entertainment in 2014. All the elements, characters and relics of the game are based on the existing lore of the Warcraft series (also developed and published by Blizzard Entertainment). It is a turn-based competition between two players, operated through the Blizzard Battle.net service, an Internet-based platform developed by Blizzard Entertainment, containing online gaming, social networking, digital distribution, and digital rights-management functions). For game mode, players can choose from four main game modes: ‘Casual and Ranked’, ‘Arena’, ‘Tavern Brawl’ and ‘Solo Adventures’, each offering a different experience. Players can pick one of nine classic Warcraft heroes to play, and then take turns playing cards from their customisable decks to cast potent spells, use heroic weapons or abilities or summon powerful minions to beat their opponent. The game also is based on classic cards and different cards from extra booster packs, and the cards are

separated into different colours to symbolise rarity, such as white (common), blue (rare), purple (epic) and orange (legendary).

1. Introduction

Esports, or electronic sports, is a relatively new term that appeared in the past 20 years. It is a young industry that has developed rapidly in the last decade; it involves hundreds of esports clubs and organisations, thousands of tournaments and millions in prize money and revenue.

1.1 Definition of esports

In general, esports involves playing video games at a professional, competitive level. In the academic context, esports is ‘a form of sports where the primary aspects of the sport are facilitated by electronic systems; the input of players and teams as well as output of the esports system are mediated by human-computer interfaces’ (Hamari and Sjöblom, 2017, p. 211). In the definition of esports, ‘electronic’ is the methods and means that refer to the various software and hardware based on information technology, and the environment created by it. This environment is fairly similar to traditional sports equipment and venues. In esports, the ‘equipment’ players use to compete relies on information technology, such as a computer, mouse and keyboard. ‘Sports’ refers to the core characteristics of sports: confrontation (or counterwork), which is the most fundamental feature. There are diverse esports categories and events, but the core must involve confrontation and competition. In addition, it is difficult to define esports in a single type, as it has more than one meaning. Jin (2010, p. 61) advanced a key point of understanding esports: ‘it is important to understand esports as the convergence of the electronic games, sports, and media. Esports is not only the convergence of sport and media, but of online gaming, sport, and media’.

1.2 Different types of esports games and platforms

As the esports industry has advanced swiftly in recent years, the difference in tournaments and game content has also developed widely. As esports’ main form of expression is competing through video games, it takes place not only on the personal computer (PC) side, but also on the home video game console.

- Console platforms and games:
  The home console is a kind of video game console. In recent years, the popular home video game consoles include the Nintendo Wii series, the Sony Interactive Entertainment (SIE) PlayStation (PS) series, and the Microsoft Xbox series.
  Home video game consoles can be used for diverse types of video games. In esports, the representative games are FIFA series (sports game/football simulator game), HALO (first-person shooter [FPS] game) and Call of Duty (FPS game).

- PC platform and games:
  The PC is another popular gaming platform in the video games market. In the esports area, the three biggest game developers are Riot Games, Blizzard Entertainment and Valve Corporation.

Three main types of games are quite popular in esports competitions among PC games: MOBA (multiplayer online battle arena, e.g. such as Dota 2 and League of Legends), FPS (such as Overwatch and Counter-Strike: Global Offensive [CS: GO]) and DCCG (digital collectible card games, Hearthstone).
In the present research, the researcher decided to mainly focus on esports games on the PC platform, as the range of esports games is too wide (more than 100 types). Most of the data were collected from League of Legends, Dota 2, StarCraft and StarCraft II.

1.3 Different states of development of the esports industry

Although the esports industry has developed at a relatively high pace, there remain differences between different regions. Table 1 shows the top countries in overall esports statistics for 2012, 2015 and 2018 (Esports Earnings, 2012; Esports Earnings, 2015a; Esports Earnings, 2018f).

Overall esports statistics: Top countries for 2012, 2015 and 2018			
	2012	2015	2018
1	South Korea	China	USA
2	China	USA	China
3	USA	South Korea	South Korea
4	Taiwan, Republic of China	Canada	Denmark
5	Russian Federation	Denmark	Finland

Table 1: Overall esports statistics: Top countries for 2012, 2015 and 2018
(Esports Earnings, 2012; Esports Earnings, 2015a; Esports Earnings, 2018f)

As Table 1 demonstrates, the development of esports in China, the USA and South Korea are top level worldwide. They are the only three countries that have continuously featured on the top 5 esports countries in the past 5 years, and the main reasons for their success are: all three countries have a relatively clearly regulated organisation or association to help the esports industry develop in the right direction; these three countries also have a series of official esports leagues and numerous professional esports clubs with many professional players, and all of the countries have relatively matured markets for the esports business, spanning sponsors to audience. Yet, not all countries are developing as well as China, South Korea and the USA.

The researcher chose the esports industry in the UK as an example to explore the difference. Esports development in the UK is still in the early stage. For example, an esports organisation called the UK eSports Association (UKeSA) was launched in January 2009 and attempted to be a governing body of esports in the UK and to provide an independent framework for government, industry and community esports interaction within the UK (GamersHell.com, 2009). Unfortunately, it filed for bankruptcy in December of the same year (Lewis, 2009). After 7 years (in 2016), another esports organisation called the British Esports Association (BEA) appeared. It is a not-for-profit national organisation that aims to support esports in the UK, increase awareness thereof, improve standards and inspire future talent (BEA, 2017). The UK also lacks competitive

or well-known local esports clubs/teams[1]. Furthermore, the earnings of UK professional esports players are falling behind comparatively: the UK esports professional player ranked 100 earned $19,635.98, while the Swedish esports professional player holding the same ranking in their respective country earned approximately double the amount (Esports Earnings, 2018g; Esports Earnings, 2018h). Also, the size of both the UK esports tournaments and prize money are in the beginning stage: there are only three local competitions, including the Electronic Sports League (ESL) UK Premiership, UK Masters and Multi-play Insomnia events, and the prize money is usually around £10,000–20,000 which is distinctly lacking compared to the million-pound prize money offered in the biggest global tournaments (BEA, 2016). The UK also lags behind in audience awareness, viewership and interest in watching, according to research undertaken by YouGov (2017).

It is undeniable that there has been some improvement in the UK in the past 5 years. In 2014, the ESL started the League of Legends Premiership, which is only for the UK and Ireland areas; the competition offered an excellent platform for UK esports clubs and attracted more players to attend (Simms, 2017). In 2015, the BBC live-screened LOL S5 (League of Legends World Championship, Season 5); they used the same platform previously used for the Glastonbury Festival and sporting events. It was the first time that the BBC live-broadcast esports matches (BBC, 2015). In November 2016, London hosted the Esports Industry Awards 2016, which had 18 categories covering all features of the esports landscape, such as Best Esports Coverage Website, Esports Game of the Year and Esports Broadcaster of the Year (Hollingsworth, 2016). Also, the BEA appears to be making better progress than the UKeSA; up until 2018, it has already worked with different organisations, such as Activision, Blizzard Entertainment, Microsoft and with the UK Government Department of Culture, Media and Sport (BEA, 2017).

In esports history, there are several famous UK esports teams worldwide, for example: 4Kings, H2K and Team Dignitas. However, 4Kings (one of the oldest esports teams, which was founded in 1997) has already disbanded. Although H2K won several prizes at global-level competitions, such as placing third three times in LCS-EU (League of Legends Championship Series-European Union) and played in two League of Legends World Championships, none of the team players are from the UK (the only British player, 'Caedrel', was transferred to H2K in January 2017). Moreover, Team Dignitas is now owned by the North American Philadelphia 76ers basketball team (BEA, 2016).

However, the UK esports industry still needs more effort and attention. In 2016, the global esports revenue was $493 million, while European esports revenue was $269 million (Statista, 2018c). The UK ranked fourth in the top five esports countries in Europe. But, compared to Sweden, which had 14.3% revenue share ($40.8 million), the UK only had 5.6% revenue share, which amounted to $16.5 million. In 2017, the global esports revenue was $696 million, with Europeans holding $298 million (SuperData, 2017a). According to Esports Earnings data (2018b): on the total statistics for highest earnings by country, Sweden was in fourth place, earning $24 million in total (with 1957 players); Denmark was in sixth place, earning $14.6 million in total (with 1006 players); and the UK was in 11th place, earning $8 million in total (with 1952 players). In total, UK esports industry development still has not caught up with the top three countries; furthermore, more effort is needed to catch up with the other European countries.

1.4 Motivation

When this researcher compared the state of esports industry development in the UK and other relatively successful countries, the intent was to study a specific part (how to motivate UK esports professional players better) of the UK esports industry. However, after searching the esports industry literature, the researcher found that although esports has drawn increasing attention from diverse sources other than its target audiences, such as the media and government, such a trend has, interestingly, not been followed as closely by academic researchers. There are many media reports on esports, but only a few studies relevant to the esports industry. Nearly no specific academic literature focuses on the general situation of the esports industry in the UK. Furthermore, a limited number of studies have focused on the whole esports industry; most researchers have focused on only one or two sectors, such as sponsors or the audience, but nearly no one has focused on the overall picture of the esports industry. Besides, the researcher found that it was difficult to work on the motivation of UK esports players without understating the general ecosystem of the esports industry.

It is necessary to understand how an industry actually works and how each sector cooperates with the other before analysing a single sector of the industry. Therefore, the researcher decided to change the research direction from the motivation of professional esports players in the UK to exploring the real situation/operations of the contemporary esports industry.

1.5 Research questions

It is relatively easy to gather some information on the esports industry (e.g. news of major esports events and professional players) from the mass media; however, there remains a great lack of information on academic research, especially on the operation of the current esports industry. Therefore, the main research questions of this study are:

(1) What are the key stakeholders in the contemporary esports industry and how do they operate/transact with each other?

(2) What is the (business) ecosystem of the contemporary esports industry?

To answer these questions, a series of exploration should be made:

- As esports is a complex concept, how does it fit in the sports context and in the digital game context?
- What are the key stakeholders of the current esports industry?
- How do these key stakeholders operate/transact with each other?
  This question aims to explore the (working) relationship between each stakeholder. Yet, as there are different working relationships between different groups of stakeholders, such as the sponsorship between sponsors and esports clubs, or between sponsors and game developers, the researcher chose one main operation progress: how to create a formal esports competition, to identify the cooperation between the components in the esports industry.
- Based on the answers to the previous questions, what might a comprehensive map of the current esports industry ecosystem look like?

These questions will be addressed in detail in the next sections.

2. Literature Review

For an esports researcher, it is important to be aware of the complex features of esports; it is not a simple category such as a sports event but a combination of different industries. In this chapter, the researcher looked into traditional sports and the video game industry to identify the connections between esports and both industries. The researcher also provides a brief introduction of the history of the development of esports, then reviews different studies on the esports industry and identifies the gap of previous research: there is a great lack of studies focusing on the ecosystem of the contemporary esports industry.

2.1 Can esports be considered a kind of sport and how does it fit in with the features of modern sports?

The argument of the real feature of esports emerged since the appearance of esports. The question ‘Is esports a real sport or not?’ has become one of the central topics of discussion in academia and general society. About this debate, Jonasson and Thiborg (2010) conducted a study titled ‘Electronic sport and its impact on future sport’. In that study, they mentioned two crucial points about supporting esports as a sport (at least in the academic arena): Allen Guttmann’s conceptualisation of modern sport theory and his seven distinguishing characteristics of modern sports. In ‘Esports and streaming in the UK in 2017 White Paper’, Greenhill and Houghton (2017) agreed with Jonasson and Thiborg (2010) and used Guttmann’s theories to support the concept that esports is a sport. Guttmann’s theory has had a great impact (at least in the academic context) on how sport is conceptualized today. Yet, both these studies did not present a detailed introduction and comparison of either Guttmann’s theories or the current situation of the esports industry. In this section, the researcher introduces Guttmann’s model for conceptualising modern sports and the seven distinguishing characteristics of modern sports. In addition, the relevant components in esports are thoroughly discussed and compared with each component of Guttmann’s theories using real examples to demonstrate the relevance between esports and traditional modern sports.

2.1.1 Comparison of Guttmann's model for conceptualising modern sports in the esports context

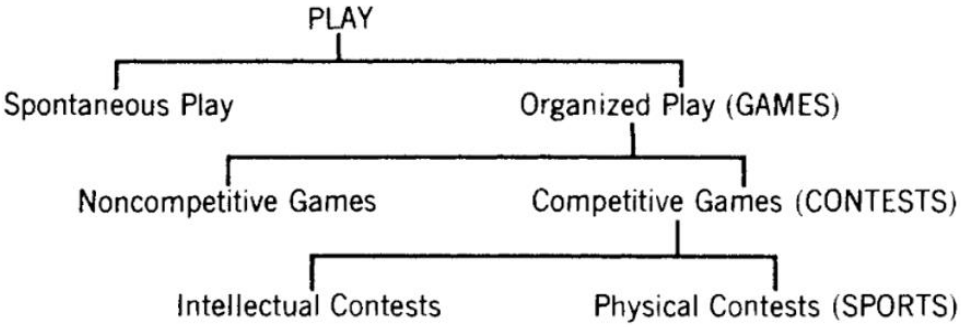

Figure 1: PLAY, GAMES, CONTESTS, SPORTS

(Guttmann, 2004, p. 9)

Figure 1 shows that, from 'PLAY' to 'SPORTS', there are four stages of the developing transition:

2.1.1.1 Play

All sports start from play. In Guttmann's explanation, play is the 'realm of freedom'; that means play involves purely nonutilitarian physical or intellectual activities, and the only purpose of itself is to experience the pleasure of the 'doing' process, not the result (Guttmann, 2004, pp. 1–3). For example, a child plays with water or mud, or people play with numbers, words, volleyballs and footballs. However, it does not include playing volleyball for achieving the requirement of a physical education class in school. The content of play can be separated into two groups: spontaneous play and organised play (games). Spontaneous play can be seen as a complete realm of freedom; however, most play require organisation and a set of rules for playing. As organised play (games) are still nonutilitarian activities, they still have their own range of freedom.

2.1.1.2 Games

When people join a 'game', they willingly give up their pure instinctive activities to follow different rules of the game. At that moment, players remain out of the range of meeting material needs but they are required to obey the self-imposed

rules (Guttmann, 2004, pp. 4). A number of games match this condition, for example, card games, Monopoly (a board game), football, and ‘playing house’ (e.g. playing roles as a teacher or doctor). Furthermore, the rules of organised games are typically aimed at making the game more complicated to play, and the main principle of setting such rules is ‘inefficiency’. For example, players are not to hold the basketball all the time without passing and dribbling and directly walking to the basket to shoot, or players are not to put the golf ball next to the hole and hit it just to achieve a hole-in-one (Guttmann, 2004, pp. 4). Bernard Suits described the role of rules in games thus: ‘To play a game is to attempt to achieve a specific state of affairs (prelusory goal), using only means permitted by rules (lusory means), where the rules prohibit use of more efficient in favour of less efficient means (constitutive rules), and where such rules are accepted just because they make possible such activity (lusory attitude)’ (Suits, 2014, pp. 43). According to his definition, the prelusory goal focuses more on winning; however, a big part of games does not involve a real winning goal. For example, there are rules for playing leapfrog (where players line up and leap over the person in front of them) but there is no real aim to the game except to have fun during the process. Therefore, in this context, games can be separated into two categories: non-competitive and competitive (contests).

2.1.1.3 Contests

In Guttmann’s model, he claimed that most games can be set in a competitive manner and that competitive games (contests) must have a won–lost outcome (Guttmann, 2004, pp. 5). He also used an example from the perspective of etymology to show the importance of contests in modern society: ‘the term “athlete” derives from the Greek words *athlos* (“contest”) and *athlon* (“prize”)’ (Guttmann, 2004, pp. 5). There are many different games in the contests range, for example volleyball, chess, basketball and football. More importantly, contests are still one kind of ‘play’, which means that the feature of contests should still be nonutilitarian. Based on the vast range of content of nonutilitarian contests, Guttmann separated contest into intellectual contests and physical contests (sports).

2.1.1.4 Sports

Although Guttmann claimed that only physical contests are sports, he also admitted that is ‘hard to imagine a sport completely devoid of intellectual skill’ (Guttmann, 2004, pp. 7). In his explanation, whether players have sufficient physical participation in contests is a crucial aspect of measuring if the contest is a sport or not. He claimed that chess is not a sport but only an intellectual contest, as there are insufficient physical activities during the game.

Comparing esports to this preliminary paradigm, the basic content of sports is play, as is the basic content of esports. Also, esports games and matches are organised play and are competitive. Furthermore, to some extent, esports players do have much physical activities during game playing. For example, professional StarCraft II players can generally perform 500–600 APM (actions per minute) and some players have even higher peak APM, but typically maintain around 200–300 APM during the whole match (LeJacq, 2013; Wong, 2014). Professional esports players have more physical activity requirements, for example in Summoner’s Rift mode in League of Legends, players need to watch the screen to check the movement and actions of their team, their own characters and the opponent teams while controlling their own characters with numerous mouse clicks and keyboard hits. Thus, considering this, esports fit the description of sports.

Besides the preliminary paradigm, Guttmann suggested seven characteristics of modern sports that have a high reputation and are widely used in academia. These characteristics of modern sports are valuable for exploring the relationship between esports and modern sports.

2.1.2 Comparison of Guttmann’s seven characteristics of modern sports in the esports context

Guttmann developed seven distinguishing characteristics of modern sports that have been used to identify and describe sport throughout history, namely **Secularism/Secularisation, Equality, Specialisation, Bureaucratisation, Rationalisation, Quantification, obsession with/the quest for Records.** In

this section, the researcher will explain each characteristic and discuss how esports fits in.

2.1.2.1 Secularism/Secularisation

The sacred and the secular is one of the differences between ancient sports and modern sports. In Guttmann's discussion, he mentioned that most ancient sports were not nonutilitarian; most were aimed at ritual or celebration. For example, the ancient Olympics were held to commemorate Zeus, god of the universe; the Olympics in Corinth venerated Poseidon, god of the sea, and the Olympics in Delphi honoured Apollo, god of the Sun. In ancient Greece, the foundation of such sports events is based on religion; the sports meet is a religious activity for showing respect to the god being worshipped. The athletes run, jump and compete for their gods, and their rewards are also from their gods. Some researchers have claimed that the ancient people did not have real sports, as most of their activities relevant to sports were aimed at serving their gods (Diem, 1971, cited in Guttmann, 2004).

Conversely, as mentioned earlier, modern sports are nonutilitarian. Players do not compete for gods or beliefs. In secularised matches, the athletes compete for secularised wishes; people will no longer run for the harvest in formal competitions. Although some athletes like to pray before games, that will not actually help them in the game. For example, prayer will not help football players have 15 players in their team and compete on the field together or help them score a goal immediately when they get the ball.

In esports competitions, the aim of games is also not relevant to religion or beliefs. We can see that some players have beliefs, e.g. Song '**Rookie**' Eui-jin, the mid lane player of Invictus Gaming (the team that won the 2018 League of Legends World Championship) is a Christian. When he appears in public, he always wears a cross necklace (he has also professed that he is a Christian), and this does not conflict with his identity as an esports professional player. Praying will not help him in actual actions during the game, such as he cannot flash further than others or have less cooldown for an item.

In the modern sports context, there is no longer a clear link with religion. On one hand, modern sports are activities for their own purposes; on the other hand, they are held for other secular purposes.

2.1.2.2 Equality

Equality is the second characteristic of Guttmann theory's; it is one of the most important features of modern sports. In primitive societies, the principle of deciding who will participate in competitions is class or ethnic group instead of performance. For primitive sports, the most important principle of deciding achievement is religion, followed by class and race; even sex is above the principle of equality. However, for modern sports, the relationship between the equality principle and achievement is vital. In Guttmann's theory, he stated that there are two meanings of equality in modern sports: (1) theoretically, everyone has the same chance of competing; (2) for competitors, the competition conditions are equal (Guttmann, 2004).

In the esports context, professional competitions reflect the principle of equality of modern sports to a large extent. For the condition of matches, competition organisers offer the same competition circumstances, for example the venue and hardware facilities (computer, internet). For the competitors (or professional esports players), every player can participate as long as they are of legal age (different regions have different requirements). Race, religion, class or sex are irrelevant. Although the number of female professional esports players cannot compare with that of male players, esports does not object to or exclude female players. In fact, equality in esports is better than that of traditional sports at this point, as female players have the same chances and platforms to compete. For example, Sasha 'Scarlett' Hostyn, a female professional StarCraft II player, beat all other male competitors and became the champion of the 2018 Intel Extreme Masters (IEM) competition (Donnelly, 2018).

2.1.2.3 Specialisation

In ancient Greece, people found that everyone has their own strengths; some perform better at running, and some are more suited to discus-throwing. Therefore, athletes began to focus on training and developing the part at which they were better. After obtaining financial support from their enthusiastic compatriots, these athletes could concentrate more on the relevant training instead of worrying about money. Based on this progress, people began to develop into professional athletes.

In medieval football, the players could choose any position on the court they wished. Over time, in modern sports, the occupational division of athletes has reached an incredible degree. For example, in American football, players are separated in 22 different positions, and each player has different technique priorities, such as placekicks and kick-offs (Guttmann, 2004, p. 38). The players work together on the field, but they all have different fixed positions. With the development of specialisation in the field of modern sports, the human resource support system has become more sophisticated. In a professional sports club, shareholders, managers, coaches, doctors, human resources personnel, even venue administrators are all necessary roles.

In the history of sports development, ‘specialisation’ and ‘professionalisation’ have the same meaning to some extent. The conventional meaning of the term ‘professional’ describes athletes who receive pecuniary compensation. The core concept of ‘professional’ is not money, but time. How much time does a person want to spend on sports training in their lifetime? Which means, to what extent could a person's skills be specialised? Specialised athletes regard the continuous improvement of individual sports skills as their main goal over a long time.

This is also the difference between professional athletes and amateur athletes or sports enthusiasts.

Esports has achieved good development in terms of specialisation.

From the aspect of professional esports players, most professional esports players who have currently joined or will join the competition at esports league and/or world championship level have been signed by esports clubs. This means they can undergo systematic training and practice planned by their club. Besides, they have a dedicated training base with training rooms, staff and player accommodation and analysis rooms, and they are equipped with the corresponding coaches, data analysts, team leaders and even housekeepers and chefs.

From the aspect of professional esports clubs, specialised esports clubs offer the corresponding training venues and related support personnel for their contracted players. In terms of business operations, professional esports clubs are like other traditional sports clubs: they have comprehensive components such as shareholders, managers, finance and human resources.

From the aspect of the esports industry, the industry becoming specialised step by step. The whole process can be characterised as follows:

- Official esports league (e.g. League of Legends Champions Korea, LCK) and world-class competitions (e.g. The International: Dota 2 Invitation)
- Professional esports clubs and professional esports players
- Large (esports) video game designers and publishers
- Relatively professional host and broadcaster who focus on esports content and media
- A certain number of audience members and enthusiasts
- Different content production teams and companies
- A series of derivative services and culture (e.g. esports education, charity and games merchandise)

2.1.2.4 Rationalisation

'Sports' is defined as organised games, which refers to games with rules. In his book, Guttman mentioned that most game rules are merely a method for players to achieve their goals. When the players realise that the convenience of the game is more important than conserving the original rules, new rules will be developed to replace the old ones. Rules come from culture; they are not divine instructions. Besides, rules are ubiquitous. For example, the rules and regulations of current sports (e.g. basketball, football and volleyball) are much more complicated than the rules that had been developed in the beginning, and most regions still retain and follow these complicated rules. For athletes, training plans have also undergone the development of rationalisation. For example, a special diet during training, a systematic training plan, and a whole set of lifestyles to improve athletic performance and competitiveness.
Esports tournaments also have corresponding rules and regulations. Except the original rules within the video game, competitive levels also have relevant rules. For example, in official League of Legends tournaments, each esports club (team) can bring a maximum of seven players, which includes five official players and two substitute players, with a maximum of two foreign players (League of Legends Championship Series LLC, 2017b). During the game, all players are required to remain in the 'glass room' (a soundproof room) and wear

soundproof headphones to shut out the voices of the commentators and audience. In fact, after years of development on holding championship series, each organiser has experience setting rules and regulations; for example, the 44-page document called '2018 Season Official Rules of League of Legends championship series' includes nine different aspects such as eligibility requirements, match process and code of conduct (LEC rules, 2019; League of Legends Championship Series LLC, 2017a).

2.1.2.5 Bureaucratisation

The function of bureaucratic organisation is to decide the rules of modern sports and to manage the complicated system of research. Every major modern sport has its own international organisation, and each international organisation supervises subordinate organisations in different countries. In 1875, the first modern sports international organisation, Union international de courses de yacht, was established, (Guttmann, 2004, p. 46). Since then, various international organisations have emerged one after another, and many of them are truly powerful. For example, the Fédération Internationale de Football Association (FIFA), founded in 1904, has to date 211 affiliated associations from different countries (FIFA, 2018a; FIFA, 2018b). Likewise, the International Olympic Committee (IOC), which was created in 1894, now has 206 national Olympic Committees, and it has stunning influence on modern sports competitions (The International Olympic Committee, 2019a; The International Olympic Committee, 2019b). Practically every country has its own government sports agency to assist, support and manage its sports development.
Based on Guttmann's theory, bureaucratic organisation has two core functions: the first is to ensure the universal application of rules and regulations, the second is to facilitate a network of competitions (Guttmann, 2004, p. 47). Typically, the network of competitions develops from the grassroots to world class. Sports associations also have another interesting function, which is the ratification of records. Records are the last and most unique characteristic of modern sports as determined by the second last characteristic: quantification.
In the esports context, the development of bureaucracy is weak. It is not that the industry has no esports association, but that at national and global level, there are none that can compare with the big organisations in traditional modern

sports. Although the number of esports associations has increased in recent years, their influence and authority are relatively weak. For example, Jonasson and Thiborg (2010, p. 291) used Sweden as example and noted that Sweden has Goodgame and the Swedish eSport Association; both have attempted to organise all players but neither had particular success. China is another example: The Association for Chinese Esports (ACE) is the only such association in the country. The ACE claims that it is a powerful organisation responsible for the registration, management, transfer and event supervision of domestic professional esports clubs; it also establishes rules and manages the esports clubs and professional players in the league. Undeniably, the ACE contributed to the Chinese esports industry at the beginning stage; however, it is a spontaneous association with no government base, and as the game developers and publishers started to take power back to organise official championship series, the authority of ACE was weakened further. Yet, not all associations are powerless or less influential. Korea is a good example: in Korea, esports is administered and organised by a national association, i.e. the Korea eSports Association (KeSpa); it was approved by the Korean government and is a member of the Korean Olympic Committee. It has the authority to certify professional esports players, provides ranking lists of the best players and organise tournaments (Jonasson and Thiborg, 2010, p. 291).

One reason esports organizations lack influence and authority stems from one big feature of esports itself: all video games that have been played in esports competitions are owned by the game developers and publishers. This is a significant difference between modern sports events (such as skiing, swimming and running). As modern sports events are not copyrighted, anyone can play these events without authorisation and these events have massive user bases. The relevant organisations and associations also develop and manage rules and league designs by absorbing the historical experience of relevant rules and competitive structure design. However, all esports games belong to the game developers and publishers, and people who want to participate have to meet their (rights owners) requirements and standards. Therefore, game developers and publishers determine the establishment of the rules and regulations of the game, the official tournament structure, and the specific requirements of esports clubs and esports professional players, not the association. Compared to most

esports associations, the commercial esports organisations (such as the ESL and DreamHack) have rather more power and rights. They at least have the ability to organise relatively formal and official competitions; of course, the premise is that they are all approved by the rights owners.

2.1.2.6 Quantification

Guttmann mentioned that ‘modern sports are characterised by the almost inevitable tendency to transform every athletic feat into one that can be quantified and measured’ (Guttmann, 2004, p. 47). Just like the gross domestic product (GDP) and grade point average (GPA), modern sports data are part of the data of modern society. When long-distance runners run a race, computers can display the average speed of a specific runner; when they pass the finish line, the computer can directly show the final time and the current records for comparison. This is just like how a computer can show the weather data of the region or a population coverage in a certain area.

In the esports context, although the achievements of professional esports players and competitions are typically not shown in mainstream media such as television or newspaper, the relevant data can be found on websites that focus on esports content (such as videos of matches, esports clubs’ achievements in previous years and record of wins).

2.1.2.7 Records

After economic behaviour is quantified, the desire to win, transcend and become the best become the main reasons for records. Guttmann used such a passage to describe the record in the modern sense: ‘The record is a number in the “record book” and in the upper-right-hand corner of the television screen, it is a stimulus to unimagined heights of achievement and a psychic barrier which thwarts our efforts, it is an occasion for frenzy, a form of rationalised madness, a symbol of our civilisation’ (Guttmann, 2004, p. 52). Records make not only competition between athletes in the same field possible, but also that between athletes in different times and spaces.

In the esports context, there are fewer records such as world records from the Olympic Games, but records on professional player esports ranks, size of prize money and the number of wins of different esports clubs are more common on

the record websites. In many FC game competitions, players typically compete in two modes: speedrun and highest score. Speedrun mode refers to players having to finish the game in the fastest way and the player who uses the least time wins; highest score mode means that players must finish the game with the highest score possible, and the player with the highest score wins. Both modes of the competition have world records and player rankings.

Guttmann's seven characteristics of modern sports are linked with each other, affecting each other systematically. Besides, the seven characteristics are also applicable in the esports context, and link and affect each other systematically. For example, when a person with no professional training experience achieves a certain level, without **specialisation** and **rationalisation**, the possibility of them setting a new record or participating in a professional esports league would be low. Moreover, specialisation and rationalisation lead to **bureaucratisation**; if there are no professional organisations, whether by game developers, publishers or esports clubs, the rules of the games themselves and competitions would not even exist, world class championships would not be organised, and records would likely not be proven in time. The **specialisation**, **rationalisation**, and **bureaucratisation** of esports also support the **equality** of the environment.

Based on Guttmann's model, we may conclude that esports is in line with the scope of modern sports competitions to a great extent. In other words, esports can be considered a modern sport.

2.1.3 The features of esports as a sport

Wagner (2006) proposed a relatively early and complete definition of esports and referred to esports as a type traditional sport in his research titled 'On the scientific relevance of esports'. In his study, he extended the definition of the term 'sport' proposed by Tiedemann (2004, cited in Wagner, 2006) to the definition of esports by comparing each key point with both terms. After a series of analysis, he defined esports as 'an area of sport activities in which people develop and train mental or physical abilities in the use of information and communication technologies' (Wagner, 2006, p. 4).

In 2017, Hamari and Sjöblom published an authoritative study titled ‘What is eSports and why do people watch it?’ In their research, they argued that the ‘in the use of information and communication technologies’ part of Wagner’s definition of esports (2006) is too vague to be used as an efficacious argument to define which sports activities are esports or sports. They also agreed with the criticism by Witkowski (2012, cited in Hamari and Sjöblom, 2017) that the definition of esports by Wagner (2006) narrowed the range of esports to only ‘information and communication technologies’, whereas esports is actually a complex combination of physical and electronic characteristics (Hamari and Sjöblom, 2017). They believed that the focus of defining esports is the ‘e’ (electronic) part and that the main difference between sports and esports is ‘where the player or team activities that determine the outcomes of the sport are manifested’ (Hamari and Sjöblom, 2017, p. 4). Table 2, presented by Hamari and Sjöblom (2017), conceptualised the difference between sports and esports.

	What space does the athlete occupy?	What sporting equipment do the athletes primarily use?	‘Where’ do the outcome-defining events happen? (field of play)
Esports	The ‘real world’	Human–computer interface (human input: e.g. mouse, keyboard, electroencephalograph [EEG], microphone, motion sensors, weight sensors, acceleration sensors; computer output: e.g. display devices, haptic feedback, audio devices)	Within electronic systems
Sports	The ‘real world’	Human–physical object interface or no sporting equipment required	The ‘real world’

Table 2: Conceptualising the difference between sports and esports

(Hamari and Sjöblom, 2017)

Based on the comparison, Hamari and Sjöblom (2017, p. 5) defined esports as 'a form of sports where the primary aspects of the sport are facilitated by electronic systems; the input of players and teams as well as the output of the eSports system are mediated by human-computer interfaces.'
This is the relatively perfect definition at present, as it is a clear description of conceptual esports and details the 'input' and 'output' features. This is also a powerful argument proving that esports is a sport.

Furthermore, in October 2017, inspiring news emerged about defining the nature of esports. At the sixth Olympic Summit, the committee officially recognised esports as a legitimate sport (The International Olympic Committee, 2017).

2.2 Digital game industry

The present esports industry is built on digital games because the major feature of esports is to play **digital games** (especially online games) at a competitive level. Without digital games, there would be no esports activity.
Previous studies have used terms such as 'video games' and 'interactive games' as a general term for digital games; however, they are insufficient for representing the whole field of digital games (Zackariasson and Wilson, 2012; Haddon, 1993, cited in Kerr, 2006a, p. 3). In the present study, the researcher uses the term 'digital games', which was used in the book '*The business and culture of digital games: gamework and gameplay*' to refer to the whole field, which contains all segments of digital games, such as arcade, console, computer, mobile, tablet and even smart TV games (Kerr, 2006a).
Digital games are generally considered software because most of the early games were coded and produced just like any other software package without any significant collaboration between individuals or organisations (O'Donnell, 2012). However, the nature of this industry is not a 'software' industry. With the industry maturing, the work of game development has become linked to a broader social, cultural, technological and political-economic system. O'Donnell (2012, p. 18) claimed that game development is 'a creative collaborative process involving numerous disciplines rooted in a particular culture producing

creative, artistic and culturally important works'; as to the nature of the digital game industry, he stated that software is part of the game development process and 'part of the very thing created, but it is not the sum of the parts'.
With the invention and development of digital game hardware and software, digital games started to become one of the major content of general public entertainment. In the meantime, the digital game market was also booming; the industry showed impressive year-by-year growth.

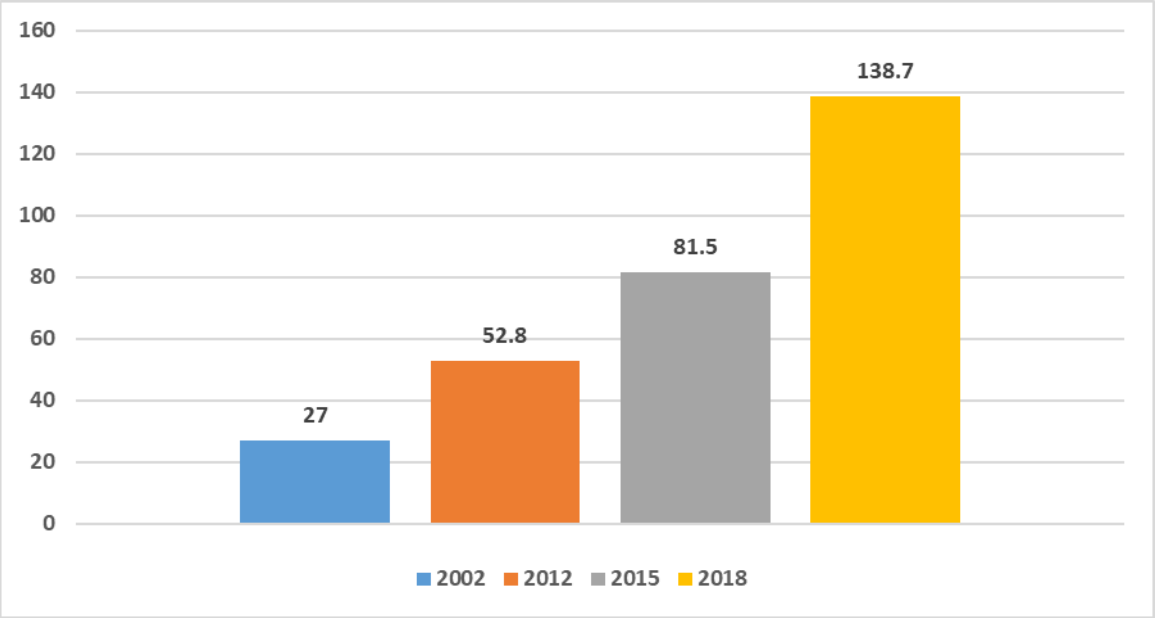

Figure 2: Global digital game market from 2002 to 2018 (in billion US dollars)
(Kerr, 2006a; Statista, 2018d; Newzoo, 2019)

As Figure 2 shows, the global digital game market grew from $27 billion in 2002 to $52.8 billion in 2012 (unfortunately, the researcher could not find accurate numbers from 2002 to 2011); furthermore, the number increased quickly to $138.7 billion in 2018 (an increase of 163% over 2012) (Kerr, 2006a; Statista, 2018d; Newzoo, 2019).
To determine how the digital game industry made this remarkable number happen, it is necessary to explore the real process of the business within the industry.

2.2.1 Production cycle, value chain and ecosystem of the digital game industry

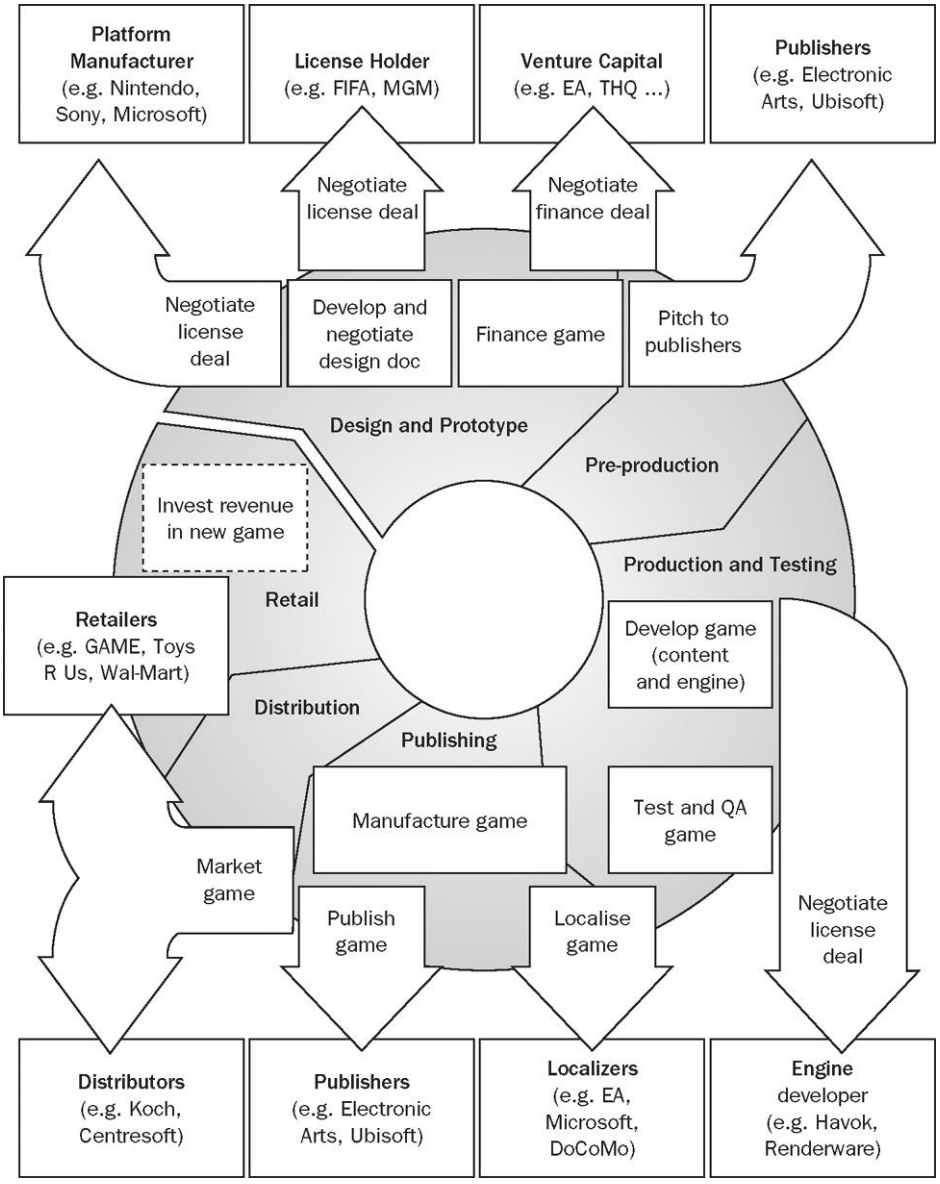

Figure 3: Production cycle of digital games

(Kerr, 2006b, p. 42)

Figure 3 shows the digital game production cycle. The time for producing a digital game can be relatively long (e.g. a console game might take around 18 months and a PC game might take an average 15 months). There are five major stages of digital game production: pre-production, production, publishing, distribution and retail (Kerr, 2006b). Pre-production is the first important stage for developing a digital game. The game developer needs to consider the

design and technology that should be used for the relevant platforms, partners and channels (Kerr, 2006b). For example, if a game developer decides to develop a digital game on PS2, they must obtain permission from Sony (Sony is the platform manufacturer of PS2), typically by paying a certain number of licensing fees. They also need to maintain the high quality of the game while designing, and consider finance issues, such as the balance of prior period investment(s) and the anticipated revenue. Next, the developer must deal with the publisher. Based on the developer's features, there are three main types of game development companies: (1) first-party developer, where the developer and publisher are the same company; (2) second-party developer, where the developer has a contract with a publisher, and the publisher will decide what game concept the developer needs to design; (3) third-party developer, which are typically independent development houses that work on their own projects and then try to sell them to publishers (Kerr, 2006a). Developers can obtain financial support from the publisher, capitalists, private sources and even via crowdfunding (Kerr, 2006b; Nucciarelli et al., 2017). During production, the publisher needs to ensure that the quality of the game meets the requirements of the manufacturer; they are also responsible for marketing events such as user testing and market research; furthermore, they are required to identify appropriate distributors and retailers (nearly 80% of publishers have specific distribution channels) (Kerr, 2006b). Big retailers such as Walmart and CeX can influence game sales by using different in-store shelf placement and marketing strategies, which make them powerful, while negotiating discounts on wholesale products and returns. Production cycles might differ; yet, most digital games adhere to these production processes (Figure 4).

Figure 4: The digital game value chain – what each stage contributes to the final price of a game

(Bank, 2002, p. 18, cited in Kerr, 2006b, p. 45)

The production cycle can also be understood as a value chain, Figure 4 shows the value chain of the digital game industry: the left column displays each stage of the digital game value chain, the middle column presents related examples of each stage, and the right column shows each stage's contribution to the final price of a game. As the figure shows, the game developer/publisher and retailer sections add the most value. Nevertheless, this publisher- and retail-focused value chain is no longer suitable for the current industry.

In the last decade, the giant digital game companies still existed in the market; meanwhile, numerous small companies that focus on mobile, PC and online games have also appeared on the market (Kerr, 2017).

Three massive changes have taken place in the digital game industry since 2006 (Kerr, 2017):

(1) Digital distribution services have been launched in the industry, leading to a large increase in digital and online revenue while reducing the income share of retail outlets;

(2) Game companies (especially giant ones) began to achieve market diversification by acquiring small businesses with relevant backgrounds. Beyond that, companies that had already succeeded in the technology and internet arenas started to enter the digital games market once they realised that game content could also yield considerable income;

(3) The market is still relatively concentrated. Although the market shows the overall growth, a large proportion of global share revenues are still occupied

by the top five companies.

Among the top five companies, Microsoft, Sony and Nintendo began to evolve into comprehensive game giants that encompassed the roles of developer, publisher, manufacturer, distributor and retailer. Yet, their sales strategies are different. Nintendo attempts to maintain revenue from not only hardware sales but also software sales; Microsoft and Sony set a low price for their hardware and make revenue from their software and merchandising sales (Kerr, 2017). These three giant enterprises control access to the main platforms and receive licensing fees from other developers and publishers who want to join. At the same time, Blizzard Entertainment and Electronic Arts (EA) continue to focus on the PC and console section in the digital game industry and have become international enterprises with billions in revenue and thousands of employees worldwide; they come into play as leading figures of institutional forms and have become a high-impact obstruction to the companies that wish to join the industry (Kerr, 2017).

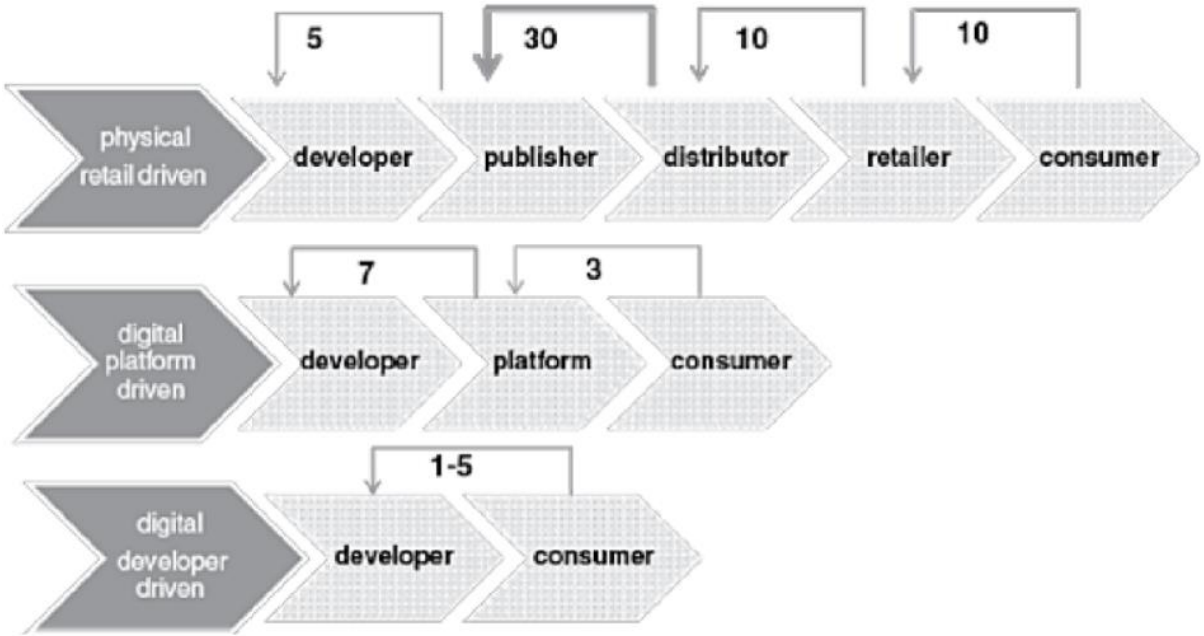

Figure 5: Value chains in the digital games industry

(Kerr, 2017, adapted from De Prato, Feijóo, and Simon, 2014, EGDF, 2011.)

Considering these changes and evolutions of the digital game industry, Figure 5 shows a series of updated value chains.

In the first value chain (physical retail–driven), publishers are taking over half of the revenue and most of the risk at the same time. Currently, big game companies such as Blizzard Entertainment, Capcom and EA are reducing the production of physical titles year by year and focusing on gaining revenue from other sectors such as online and merchandising sales (Kerr, 2017). Over the past 10 years, the second value chain (digital platform–driven) has quickly acted in the PC, mobile and online game sectors; as Figure 5 shows, around 30% of revenue go to the platform (Kerr, 2017). As more and more game developers are first-party developers, they have begun to offer more services on their distribution platforms, which allows players to also influence the game they like, for example, Steam provides a player community for communicating with their players; it also encourages players to make their own changes to different games by designing their own downloadable content (DLC). Digital distribution makes it easier for game developers and publishers to launch their games without the limitation of console hardware cycles and hardware manufacturers; yet, it also leads to more intense competition between these companies (Kerr, 2017). In the third value chain (digital developer–driven), although the developer can hold most of the revenue, it also needs to face all the risks from each stage of the production cycle.

In addition to the value chain, there is another useful means of analysing an industry: **business ecosystem**[2]. It is a network of organisations, which includes not only manufacturers, suppliers, distributors, retailers and consumers, but also competitors and government agencies.

[2] The term 'ecosystem' was introduced in the 1930s by a British botanist, Arthur Tansley. The ecosystem describes a community of organisms, and each organism in this community can influence each other and their environments, for example water, plants, air, etc. These elements cooperate, compete, evolve and adapt to external disruptions with each other to thrive.
In 1993, James Moore introduced this biology term to the business context in his article 'Predators and Prey: A New Ecology of Competition'. He stated that 'a business ecosystem, like its biological counterpart, gradually moves from a random collection of elements to a more structured community… Business ecosystems condense out of the original swirl of capital, customer interest, and talent generated by a new innovation, just as successful species spring from the natural resources of sunlight, water, and soil nutrients' (Moore, 1993, p. 76).

De Prato, Lindmark and Simon (2012) analysed the value network/ecosystem of the European video game software industry. They considered that the value network/ecosystem of traditional video game software generally involves ‘game development, middleware production, publishing, marketing, distribution, retail and consumption’; this could also be considered a similar ecosystem to media industries, which generally contain ‘the steps of content creation, content publication, content distribution, content retail and content exhibition/consumption’ (De Prato et al., 2012, p. 225). Furthermore, these roles have been set in four main segments: (1) game development, (2) publishing, (3) middleware development and (4) distributors and retailers. (1) Game development: In the game industry, it is the process of content creation, which includes the different activities relevant to game production, such as designing, pre-producing, producing and testing games. There are two main kinds of game developers: first-party developers (game developers and publishers are the same organisation) and third-party developers (independent development houses); (2) Publishing: Publishers need to take responsibility for a series of activities during publishing, such as identifying titles, acquiring the intellectual property rights for new games and licensing the rights, and marketing activities, etc. To gain a wide range of revenue, publishers typically work with multiple platforms instead of focusing on only one platform. (3) Middleware development: Middleware is ‘the software that is situated between OS and drivers and end-user applications’ (De Prato et al., 2012, p. 229). In the video game context, it mostly means engines, which are sets of tools for game development ‘including libraries and applications that allow software developers to develop applications faster, at a lower cost and in a portable way’ (De Prato et al., 2012, p. 229). There are three main kinds of game engines: free open-source engines with the source code; freeware engines without the source code; and commercial engines (De Prato et al., 2012). (4) Distributors and retailers: There are diverse actions in this section beyond merely selling a product (video games) to the customer; it also includes activities such as inventory-keeping and logistics. The business ecosystem is a valuable means of understanding an industry in a comprehensive way: it provides not only a whole picture for people willing to understand the industry, providing guidance for new participants willing to join

the industry, but also better understanding of the components already present in the industry.

2.3 Esports industry

2.3.1 A short history of esports

In the 1980s, different arcade games were notably popular around the world, which led avid players to move their attention from casual leisure playing to competitive content, such as highest score competitions or the fastest speed for finishing the game (Taylor, 2012, p. 2–3). The idea of esports started from arcade competitions; then, the context transferred to PC games over time. The Cyberathlete Professional League (CPL) established in June 1997 was the first organisation to make video games an official competition (Wagner, 2006). Later, South Korea took the baton and led a storm of esports evolution with a series of StarCraft competitions.

At the end of 1997, the Asian financial crisis dealt a severe blow to the East Asian economies. South Korea was one of the countries impacted by the crisis: the economy was significantly weakened, the South Korean won fell sharply by 50% and the stock market plummeted by more than 70% (Luo, 2009).

On 31 March 1998, Blizzard Entertainment released the PC game StarCraft. It sold more than 1.5 million copies in that year and won the bestselling PC game of 1998 (Blizzard Entertainment, 2008).

In South Korea, StarCraft drew the attention of many people and quickly became an outstanding multiplayer game in the country. The game has been bursting into teenagers' computers and even television from the day it was published. Due to the financial crisis, computer and television became one of the few best means of entertainment. Soon, there were more and more South Koreans on Blizzard's official battle network (Battle.net). By July 1998, South Korean players occupied most of the top 1000 positions on Battle.net, marking the quiet rise of esports in South Korea (Luo, 2009). At the same time, the popularity of StarCraft caught the attention of the South Korean government and media. As the South Korean government began to focus on reforming its industrial structure after the financial crisis, the esports industry also become an

object of support. The government set aside 50 billion won and a range of preferential policies to support the online game industry (Luo, 2009; Jin, 2010). In 1999, the Korea ProGame Association was established under the auspices of the South Korea Ministry of Culture, Sports and Tourism, and was the first esports association with governing body (it was the predecessor of KeSPA). In the same year, the famous South Korea cartoon and anime (cable television) channel Tooniverse held the Progamer Korea Open (PKO) in Seoul and broadcast it on TV channels. PKO was one of the earliest professional StarCraft competitions and one of the first to include live commentary during broadcasting (Liquipedia, 2018). In 2000, Tooniverse officially established its game channel Ongamenet (OGN), which specialises in broadcasting esports competitions and relevant video game content. PKO ultimately became the first in the OGN Starleague (OSL) series, which was the first professional esports league in South Korea (Korea-StarCraft-League, 2008a). The success of PKO gradually started the formal operation of the Korean StarCraft League, and 'esports' began to come into view as a new term. Other than OGN, another cable television game channel, MBC Game, also began to operate another StarCraft league: MBCGame StarCraft League (MSL) (Korea-StarCraft-League, 2008b). This marked the first big step in South Korea becoming the first esports empire. With the emergence and development of professional esports leagues (especially StarCraft professional leagues) and the encouragement and support of the South Korea government, the atmosphere of esports in South Korea became livelier; correspondingly, esports programmes also became more diverse. With the rise of the television entertainment industry, esports became one of the cultures followed and spearheaded by the South Korean mass media. During this period, professionalisation also improved greatly. StarCraft professional players began to join different esports clubs sponsored by giant enterprises such as Samsung (a South Korean multinational conglomerate, ranked the sixth highest global brand value in 2017), SK Telecom (Sunkyong Telecom, one of the largest chaebols of South Korea) and KT Corporation (Korea Telecom, the largest telephone company in South Korea) (Samsung Newsroom, 2017). These professional players had managers, sponsors, training camps and systematic training plans and schedules; daily training could total 13–14 hours and they only has a 1-month holiday in a whole year (Bellos,

2007; Blizzard Entertainment, 2017). In addition, these professional players were promoted and packaged as superstars. Their fans came to watch each of their matches and send them numerous gifts, even waiting for them in parking lots only to see them at a closer distance; furthermore, their competitions were broadcast by three South Korean gaming television channels 24 hours a day (Bellos, 2007; Evers, 2006).

In 2000, the South Korean Ministry of Culture, Sports and Tourism, the Ministry of Information and Communications, and Samsung sponsored the World Cyber Games (WCG), which was the largest global esports competition, and was also known as the Esports Olympics. Professional esports players participated to fight for gold, silver and bronze medals. During the WCG opening ceremony, players carried their national flags onto the stage and represented their countries; the organisers also established a 'games village' (akin to the Olympic Village), and started to change the host city year by year from 2004 onwards (Kolev, 2017; WCG, 2019a). The WCG has been held for 14 years and was suspended in 2014 (the latest news stated that WCG will be relaunched in Xi'an, China, in 2019). During these 14 years, nearly 8000 esports professional players from more than 75 countries participated in the WCG (Kolev, 2017; WCG, 2019b).

Whether for South Korea or for the world, the WCG has great significance for the development of esports. Via the WCG, the trend of esports was extended to the whole world, especially China and the USA. Based on special content and entertainment, esports became progressively popular among teenagers.

2.3.2 The rise of the esports market

Perhaps esports began with avid gamers and enthusiastic fans getting together and competing through the games they loved most; yet, it is transforming to a new industry with swift development speed. Compared to the $137.8 billion revenue of the video game industry in 2018, the revenue of the esports industry was only a small part of it (Newzoo, 2019). But as a derivative industry, esports has becoming an industry with high potential, from its size to professional progress.

According to reports from Newzoo and Statista (Figure 6), esports revenue increased from $130 million to $655 million from 2012 to 2017; esports audience numbers (including people who only watched once or twice and people who watched regularly) increased from 134 million people in 2012 to 335 million in 2017 (Newzoo, 2017a; Statista, 2018b). This indicates that global viewers increased by 250% and that global esports revenue increased by 500%.

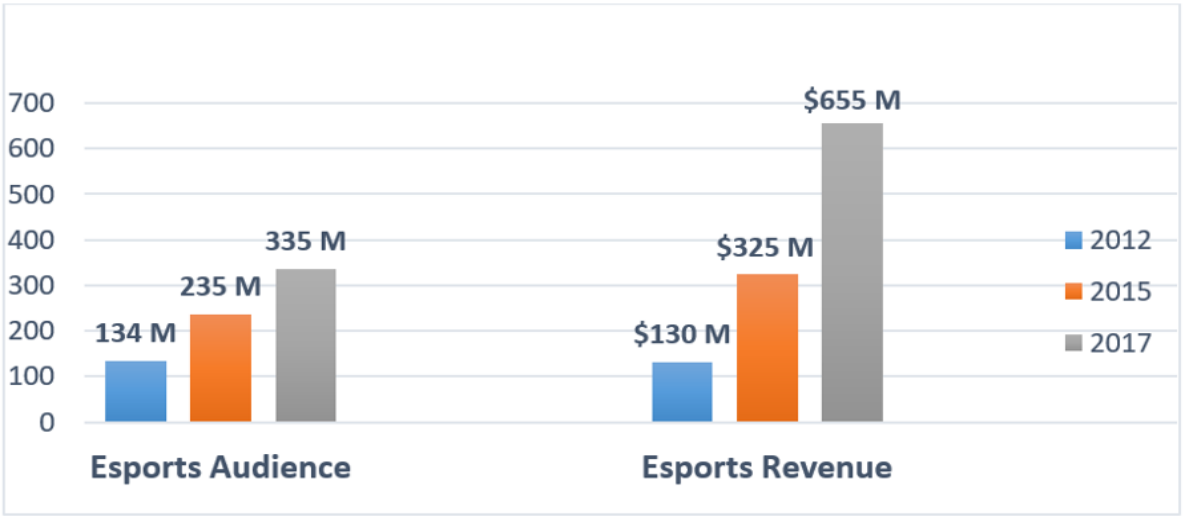

Figure 6: The rise of esports from 2012 to 2017

(Newzoo, 2017a; Statista, 2018b)

In the 2018 Newzoo global esports market report, esports audience numbers were predicted to rise to 557 million people, and that esports revenue would increase to $1650 million (Newzoo, 2018).

Other than industry revenue and audience figures, the increased prize money in esports competitions is also astounding. For example, according to the 2016 Newzoo global esports market report (Figure 7), the global esports tournament prize pool grew from $5.2 million in 2010 to $19.8 million in 2013; furthermore, it increased sharply to $36 million in 2014 (an increase of 81.8% over 2013) and to $61 million in 2015 (an increase of 208.1% over 2013) (Newzoo, 2016).

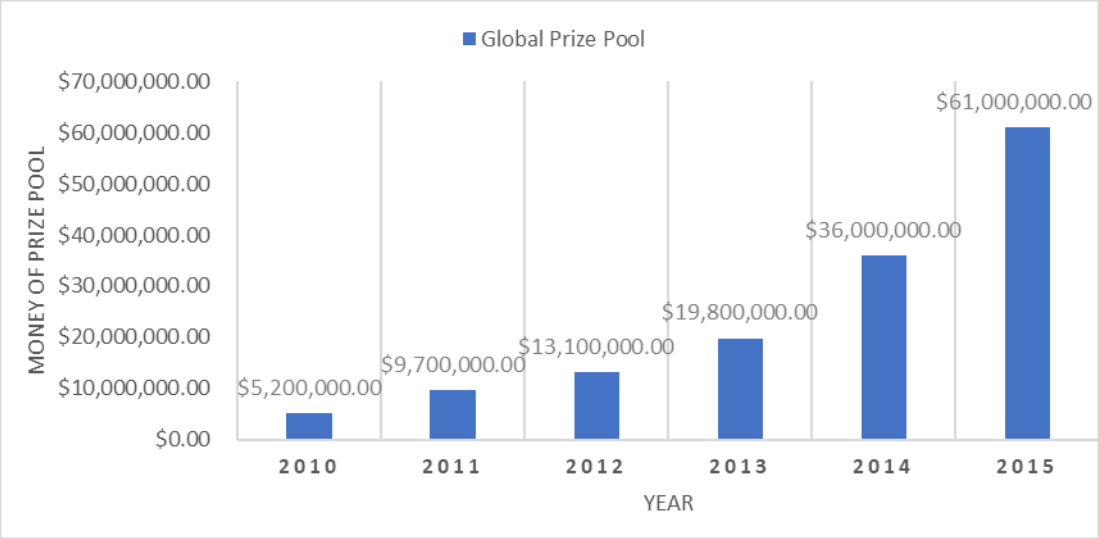

Figure 7: The increasing global prize pool

(Newzoo, 2016)

In 2014, 27 million people watched the League of Legends World Championship finals, exceeding that of the audience of the Wimbledon finals or National Basketball Association (NBA) finals that year (Dorsey, 2014). In 2017, the total prize pool of The International Dota 2 championship was around $24.7 million, and each professional player from the champion team earned nearly $3 million, only by the final match (Dota 2 Prize Pool Tracker, 2018a). In 2018, the prize pool finally exceeded $25 million (Dota 2 Prize Pool Tracker, 2018b).

As the market grew larger by the year, esports began to draw attention from large enterprises spanning different industries, such as manufacturing (Mercedes-Benz), food and beverage (Coca Cola), and telecommunications (SK Telecom). These investors (or sponsors) invested millions of dollars into different esports clubs and other sections of the esports industry. Furthermore, these sponsorships form the main revenue of the esports industry, for example, in 2017, sponsorship comprised the greatest proportion of revenue (38%), which was $266.3 million of the total revenue for that year.

The industry has also drawn attention from traditional sports teams and professional sportspeople, e.g. NBA superstar Shaquille O'Neal invested in NRG eSports in 2015 (BEA, 2016). In addition to basketball teams, football clubs have also invested in esports clubs, for example, FC Schalke 04 (a German football club) signed Elements (a League of Legends team) in 2016

(East, 2016a); Manchester City and West Ham United also signed FIFA esports players in 2016 (East, 2016b; East, 2016c).

2.3.3 Previous studies on the esports industry

There is a positive trend of academic esports studies. As of March 2018, 150 esports research papers have been published (Table 3). These papers covered seven different disciplines such as informatics, business and sociology (Reitman et al., 2019).

Discipline	Total publications
Media studies	37
Informatics	30
Business	26
Sports science	20
Sociology	15
Law	12
Cognitive science	10
Total	**150**

Table 3: Esports studies from different disciplines through March 2018 (Reitman et al., 2019)

Other than these published papers, the number of books and students' studies on esports are also increasing by the year. The studies cover a diverse range of topics within each discipline. For example, the business discipline studies involve sponsorship (Ströh, 2017; Korpimies, 2017), customer buying behaviour (Saarnisto, 2017), business models (Carvalho, 2015) and marketing management (Seo, 2013). In the present study, the researcher chose to review the studies most relevant to the research questions:

(1) The relationship between the esports industry and video game industry. This relationship could be explained as esports being one of the outcomes (or derivatives) of video game industry development. The esports industry is inseparable from the video game industry, especially the online game industry. Several studies have examined the relationship between the

esports and digital game industries based on specific regions, for example, Jin (2010; 2011), Jin and Chee (2008) examined the development of the online game industry in South Korea and the role esports is taking in the online game industry; he also explored how esports grew to a type of cultural phenomenon in South Korea.

During the 1990s, because of the increase in online game players, television channels live-broadcast online gaming leagues, and the spread of the internet and PC quickly increased the popularity of online games among the general public in South Korea, especially among youths. With this wave, giant corporations such as Samsung and SK Telecom began to invest in the esports industry as a form of new media/cultural business (good examples include the establishment of a series of StarCraft leagues and international competitions such as the WCG); this led directly to the development of professional esports clubs, players and competitions (Jin, 2010). This trend also influenced the growth of the South Korean online game market. In 2005, the South Korean online game market was worth $1.4 billion, which comprised 56% of the whole Asia-Pacific market share; afterwards, the market increased to $2.6 billion by 2008 (indicating that the market grew around 20% each year) (Jin and Chee, 2008). Besides, media and broadcasting offered an appropriate environment for the rapid growth of the esports industry, especially in presenting a positive image of esports. For example, the famous professional esports players are respected and adored as superstars by the South Korean general public. Jin (2010; 2011) noted two unique features of the South Korean esports industry: The South Korean esports industry is based on the support of the South Korean government, which is not common in other countries; also, esports content broadcasting is based on television channels instead of online platforms. Both these conditions have made the development of esports in South Korea more substantial and easier. Furthermore, he pointed out that esports not only has entertainment and cultural importance, but it also has business-oriented industrial features. With the growth of the online game industry, the role of the esports industry as a major business area as well as cultural genre will also increase (Jin, 2010).

Jin’s studies explain the relationship between the esports industry and the

digital game industry (especially the online game industry) and provide examples of the South Korean esports industry. He has also highlighted the media, especially broadcasting, as a key element of the rapid growth of the esports industry.

(2) The components of the esports industry ecosystem/value network.

Although academic interest in esports has increased in recent years and the category of studies are also greater than before, not much is known about the esports industry, how the components of the industry really work with each other, and what their actual relationship is, as researchers only focus on one or two elements of the industry.

One of the major components researchers have paid attention to is live streaming. For example, Johnson and Woodcock (2018) explored the impact of live streaming on the video game industry by studying a specific online live streaming platform: Twitch.tv. This study is an important example, as the research has strong data support, containing 100 qualitative interviews with professional live streamers, the ethnography of both online and offline live streaming events, and observation of Twitch streams. Johnson and Woodcock (2018, p. 2–3) focused on exploring the 'newly central role' of live streaming in the current political economy of the video games ecosystem and claimed that it is a major new force in the game industry. The key findings of their research are: (1) live streaming can not only create new links between game developers, publishers and other influencers but also between the consumers and decision-makers of video games, for example live-streaming recently launched games can provide relevant information to players/consumers, and the decision-makers of video games can also follow consumers' choice of the game by checking the view times of different video games; (2) live streaming offers relatively fair opportunities and platforms for the dissemination of video games, regardless of the size and nature of the game developers; (3) live streaming offers a new means of learning relevant knowledge of game creation, which challenges traditional expensive and highly competitive game-design training (Johnson and Woodcock, 2018). They also mention that esports is a successful example of how performative play has influenced the video game industry, as esports can not only draw

attention from the player base but also bring in a considerable income for the video game industry.

(3) The ecosystem of the esports industry

Hein (2012) performed the first study on the esports ecosystem by comparing and contrasting the traditional sports industry and the esports industry, and showed that the two industries have many similarities. Carvalho (2015) also introduced the esports industry by comparing it with traditional sports business; citing the impressive work of Hein, he also presented the convergence of the esports and sports industries.

Figure 8 and Figure 9 from Hein (2012) and Carvalho (2015) present the main relevant content of the structure of the esports industry and its ecosystem.

- Modern Sports Industry

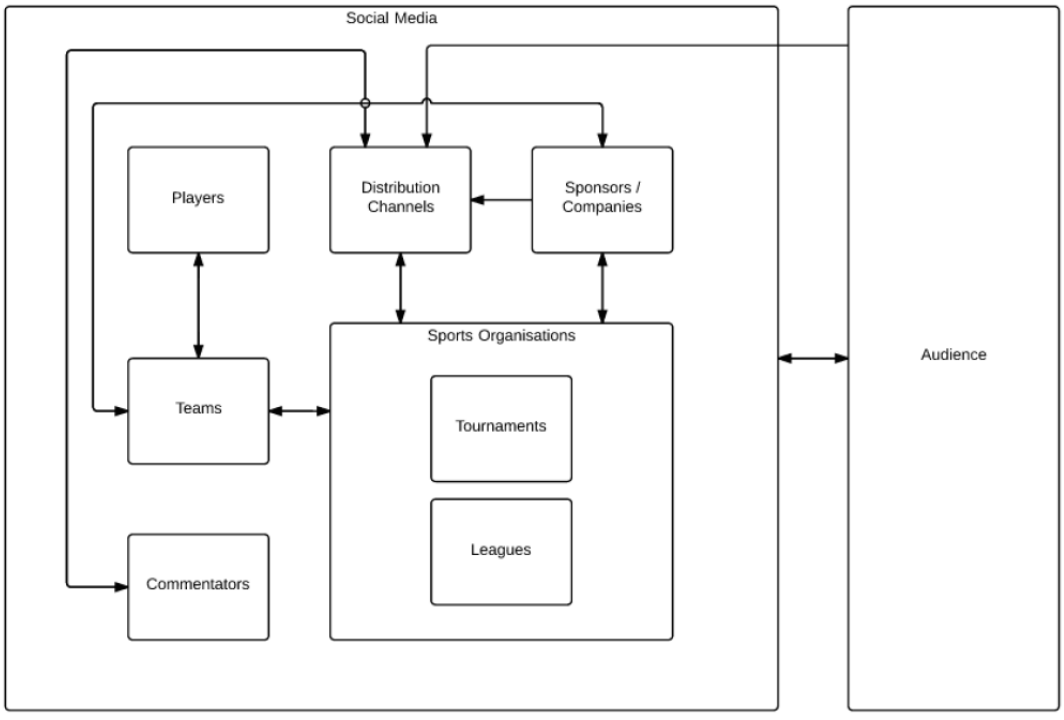

Figure 8: Traditional sports relationship diagram

(Hein, 2012, cited in Carvalho, 2015)

In traditional sports business, Hein (2012) described six main components. The first is teams and individual athletes; Carvalho (2015) considers them organisations that could make the most profit because they are able to meet the need for their products in the corresponding sports markets. This also leads to the need for players/athletes, as they are the production factors in sports markets. As only the athlete's skills and capacity can be measured instead the value of a whole person, teams typically invest more than an athlete is actually worth (Hein, 2012, cited in Carvalho, 2015). The second component is sponsorships, which form a huge part of traditional sports business. Sponsors enjoy a range of benefits from the organisations they fund based on how much they invest. The third component is sports leagues and associations, which operate in the industry as different types of governing bodies. The main functions of sports leagues and associations matches the explanation of bureaucratisation in Guttmann's model, i.e. to set the rules and regulations of different sports with supervision and management of sports teams and players in the long-term, and to organise different levels of competitions (from grassroots level to world class). The fourth component of traditional sports business is media and broadcasting; the broadcaster's programming content is determined by three aspects: television rights, broadcast services and the audience. In this case, even events of the same sport may be different, as they have to be considered different products (Noll, 2007, cited in Carvalho, 2015). The major broadcasting platform of traditional sports is television, and this situation is slowly changing as internet and mobile technology are developing at a high pace. The fifth component is casters and commentators, who provide real-time competition explanation and commentary. Finally, the last component is consumers, who have two main roles: the audience who joins the match or watches it from different media platforms, and the target group whose attention sponsors and organisations attempt to gain (Noll, 2003).

- The esports industry

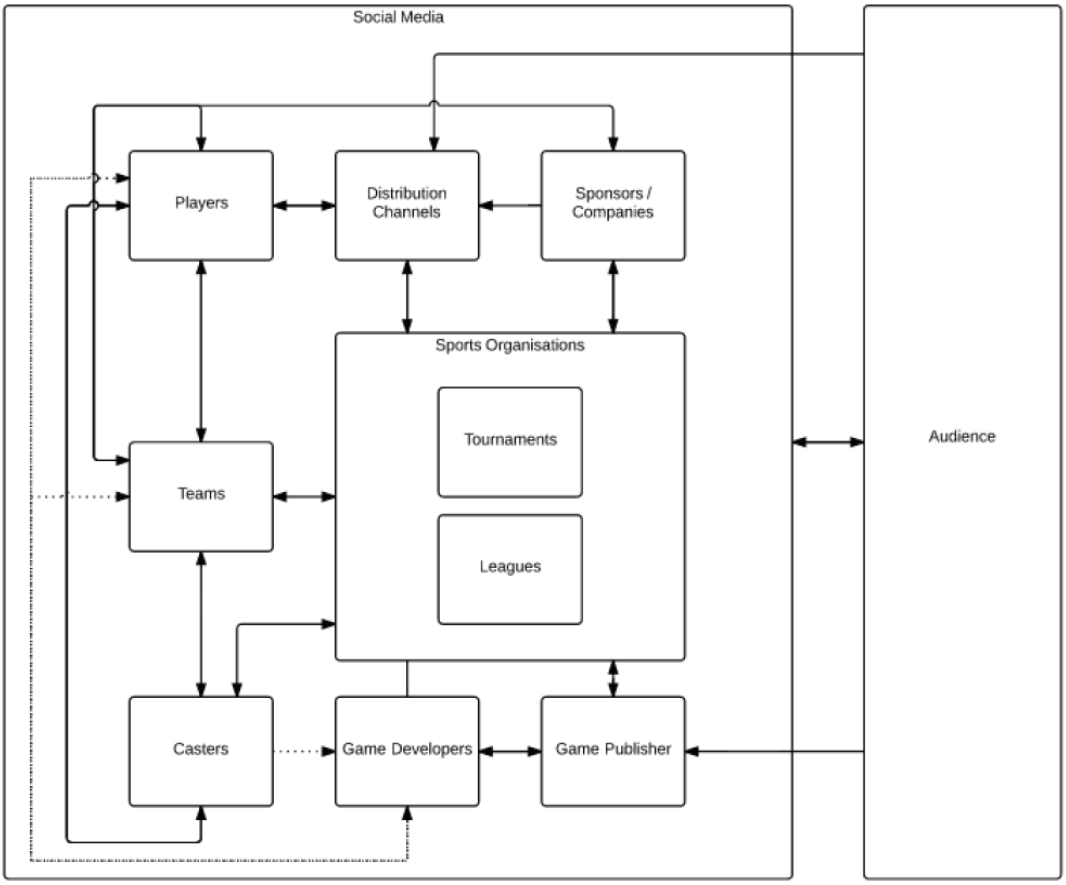

Figure 9: Electronic sports relationship diagram

(Hein, 2012, cited in Carvalho, 2015)

In Figure 9, Hein (2012) and Carvalho (2015) compared the esports industry with traditional sports, and they considered that esports has the same structure as traditional sports but with some unique aspects. Therefore, there are also six components of esports business. The first component of esports business is teams and players; unlike traditional sports teams, esports teams cannot really share the prize money with their players, which means that they lose a crucial part of profit from the market. Hein (2012) also claimed that not many esports players can earn a $100,000 yearly income, as their teams only provide a monthly basic salary of up to $1200. The second component of esports business is sponsors, which play a key role in the esports market, as their investments are the main income of esports clubs. The major sponsors in esports are technology sectors such as Intel and Dell, and include consumer

market product companies such as soft drinks and hygiene products (Hein, 2012, cited in Carvalho, 2015). There is also an interesting characteristic of sponsorship in the esports industry, namely the new method of advertising: as esports audiences typically focus on the scene in the game instead of on the players themselves, game developers began to place virtual banners within the game (Hein, 2012, cited in Carvalho, 2015). The third component of esports business is association, which was led by the increase in public interest in watching high–skill level game competitions. KeSPA had been cited as a successful example, as it has a government base and real authority for managing esports events and set rules and regulations for professional esports players (Hein, 2012, cited in Carvalho, 2015). The fourth component of esports business is media. The most common broadcasting method in esports is online streaming, which is distinct from the media structure of traditional sports. The fifth component of esports business is casters and commentators, and their job is quite similar to that in traditional sports. The only difference between the casters and commentators of the esports industry and traditional sports industry is that their backgrounds and execution are relatively dissimilar (Hein, 2012, cited in Carvalho, 2015). The sixth component of esports business is amateurs and spectators, who both play a big role in the esports market, as they are one of the vital income streams of the industry (Carvalho, 2015).

Hein (2012) and Carvalho (2015) presented an important comment on the biggest difference between relationships within the esports industry and within the traditional sports industry, which is ‘all participants have some level of cooperation, which ends up benefiting both parties’ (Carvalho, 2015, p. 28). For example, game developers offer professional esports players appropriate privileges such as free access to all in-game items and rewards, or experiencing an unreleased version in advance (Hein, 2012, cited in Carvalho, 2015). Beyond that, Carvalho (2015) presented three generic business models (by using a business model canvas) designed for different esports teams in the study titled ‘Business Models in Professional Electronic Sports Teams’. His research covered first-level esports clubs (professional teams) and second-level esports clubs (semi-professional teams), and provided a relatively clear

understanding and identification of how esports clubs work, and provided a foundation for designing unique business models for esports clubs.

However, the research of Hein (2012) and Carvalho (2015) appear to have some differences compared to the current situation of the esports industry. First, Hein's research was performed around 7 years ago, and that of Carvalho was 4 years ago, which means that some of their opinions have become relatively outdated as the development of the esports industry has changed dramatically over these years. For example, regarding the income of esports clubs and players, in 2012, the total prize money of The International 2012: Dota 2 Championships was $1,600,000, and the total prize pool of the League of Legends Season 2 World Championship was $2,000,000. However, in 2018, the total prize pool of The International 2018: Dota 2 Championships was $25,532,177 (which is nearly 1600% more than that in 2012) and the total prize money of the League of Legends 2018 World Championship was $6,450,000 (which is around 320% more than that in 2012) (Esports Earnings, 2014; Esports Earnings, 2015b; Esports Earnings, 2018a; Esports Earnings, 2018c). The earnings of professional esports players have increased greatly as well: the current statistic data of Esports Earnings (2019) show that more than 500 players (overall) are earning more than $190,000 (unfortunately, yearly earning data are lacking). The types of sponsors have been greatly expanded, for example, pop stars (e.g. Imagine Dragons), and traditional sports stars and teams, especially traditional sports sectors, have shown increasing interest in the esports industry in recent years (Stewart, 2018). The present paper will describe this point in the later chapters. Furthermore, esports clubs are using emerging methods to gain revenue. Of course, the primary source of esports club incomes remains the investment funds from sponsors, but the sale of team merchandise and the funds from live-streaming platforms have also become important revenue-earning approaches for esports clubs (Jacobson and Peskin, 2017).

Second, the diagram of the relationship in the esports industry shows several key stakeholders in the industry and the collaboration between them. However, the diagram itself is relatively simplistic, and some parts of the diagram can be added, integrated or reorganised based on the current situation of the esports

industry. Furthermore, it only shows the link with each sector, but the reader cannot really tell the kind of relationship between each sector or how the cooperation actually works between each sector.

Based on the literature review, the researcher found a research gap in previous studies on esports: only a handful of studies have focused on the esports industry ecosystem. As the pace of esports development has become quicker in recent years, it is necessary to build a complete map of the esports industry. A comprehensive map of the esports industry ecosystem can not only aid understanding of how the industry works but can also show the relationship between each element. Furthermore, this map should make a valuable contribution to the academic arena; it would provide the beginner (researchers who are new to esports) with an easy understanding of the esports industry and help professionals (researchers with experience studying esports) have a clearer understanding about the current relationship between each sector of the esports industry, as some of them might have changed.
As esports is competitive-level gaming play, one key element of the industry is working around competitions/tournaments. Therefore, the researcher decided to develop a complete map containing all key stakeholders of the contemporary esports industry and link each part with the theme of ‘how to create a formal esports competition’.

3. Methodology

3.1 Design

The research questions determined that the feature of this research is an exploratory study, which is ‘a valuable means to ask open questions to discover what is happening and gain insights about a topic of interest’ (Saunders et al., 2016, p. 174). An exploratory study is particularly useful if a researcher wants to clarify their understanding of an issue, problem or phenomenon. Therefore, a qualitative approach would be applicable, as qualitative research provides ‘strategies for exploring experiences, practices, and phenomena in sociocultural worlds, which includes emotions, motivations, symbols and other features related with naturally evolving lives of individuals and groups’ (Berg and Lune, 2014; Moen and Middelthon, 2015).

The present research used mixed methods in the research process: combining document analysis and semi-structured interviews.

The first stage involved document analysis, where document secondary data were collected and analysed to gather fundamental information of the esports industry from the perspective of an ‘outsider’ (who has no direct connection with the esports industry, such as reporters, academics and business organisations). With the document analysis, the researcher initially identified six important roles (stakeholders) of the current esports industry.

The second stage involved three detailed, semi-structured interviews for collecting further information from the perspective of the ‘insider’ (people who work directly in the esports industry, e.g. game developers and publishers, esports clubs and professional esports players). With the interviews, the researcher explored the operations among stakeholders in the real esports industry, checked the applicability of the stakeholders that been discovered in the first stage, and explored new stakeholders that had not been identified in the first stage by querying the real situation of the current esports industry.

3.1.1 Document analysis

Document analysis is a ‘systematic procedure for reviewing or evaluating documents – both printed and electronic material’, it ‘requires that data be examined and interpreted in order to elicit meaning, gain understanding, and develop empirical knowledge’ (Bowen, 2009, p. 27). Document secondary data are ‘defined as data that, unlike the spoken word, endure physically (including digitally) as evidence allowing data to be transposed across both time and space and reanalysed for a purpose different to that for which they were originally collected’ (Lee, 2012). There are two types of document data: text and non-text. Text resources contain organisation databases, correspondence (e.g. emails, letters, memos), blogs, tweets, committee reports and minutes, books, journal and magazine articles, newspapers, diaries and transcripts of speech and conversations, and text of web pages. Non-text materials are more relevant to the media category, e.g. voice and video recordings, television and radio programmes, pictures, films and non-text content of web pages (Saunders et al., 2016, p. 319). The advantage of using document analysis is that: (1) it is more efficient than other research methods, as it requires data selection, not data collection; (2) documents are relatively easy to access and typically contain large amounts of information; (3) documents can be useful for triangulating data, i.e. obtaining a picture of the data already collected for research from different sources; (4) documents are stable: they will not be affected by the research process and are suitable for repeated reviews (Matthews and Ross, 2010; Bowen, 2009).

3.1.1.1 Data collection

Document analysis involves ‘skimming (superficial examination), reading (thorough examination), and interpretation’ (Bowen, 2009, p. 32); it is a reduplicative process involving content analysis and thematic analysis. Content analysis aims to organise information into categories related to the research questions; thematic analysis aims to discover themes pertinent to the research questions based on coding and constructing the selected data.

In the present study, the researcher systematically searched different types of documents relevant to esports and the esports industry, especially with the following key content: 'important roles/component/stakeholders of esports industry'. For selecting the final sample of stage 1, the researcher skimmed more than 200 documents, read and gathered useful information from around 130 documents that included books, academic papers, official website news, business reports and professional statistical reports, and media reports.
The final sample documents were purposefully selected for inclusion if they contained information closely related to the stakeholders of the esports industry. If a document had limited information relating to stakeholders of the esports industry or ecosystem, such as media reports that only related to one component of the esports industry, it was excluded from the sample. For example, the BBC report titled 'Rise of the esports superstars' only focused on professional esports players, and was excluded from the sample as it does not reflect a complete picture of the esports industry. The researcher also considered the reliability and validity of each document during sampling, for example, T. L. Taylor is a sociologist with a high reputation, her book '*Raising the Stakes: E-Sports and the Professionalization of Computer Gaming*' has been cited 469 times, which is a high number of citations in publications of e-sports research; Newzoo is a professional business organisation that focuses on games and esports analytics, it has numerous powerful partners from different industries, e.g. Red Bull, Tencent, BBC and Team Liquid; also, most of the current esports studies and reports use their data, which lends high credibility to their work; and the media reports are all from well-known websites or professional esports media websites. Furthermore, all the documents were published/posted within the last 10 years. The sample contained 14 resources, half of them were in print form and the remaining half were digital. There were four main document types: books, academic papers, business reports and media reports. Table 4 shows a full list of the selected documents.

Name of the document (year of publication/posting)	Author	Type of document
Raising the Stakes: E-Sports and the Professionalization of Computer Gaming (2012)	Taylor, T.	Monograph (edited volume)
Esports: The Complete Guide 17/18: A guide for gamers, teams, organisations and other entities in, or looking to get into the space (2017)	Shabir, N.	Book
Korea's online gaming empire (2010)	Jin, D. Y.	Book
The eSports Market and eSports Sponsoring (2017)	Ströh, J. H. A.	Book
Good Luck Have Fun: The rise of eSports (2016)	Li, R.	Book
From a closed community past-time to a successful niche market: An analysis of the eSports market (2012)	Hein, R.	Master thesis
Business Models in Professional Electronic Sports Teams. (2015)	Carvalho, J.	Master thesis
The digital Korean wave: local online gaming goes global (2011)	Jin, D. Y.	Journal article
The Global Growth of eSports: Trends, Revenues and Audience Towards 2017 (2017)	Newzoo	Business reports
European esports conference brief (2017)	SuperData	Business reports

Just a game? Understanding the existing and future esports market in the UK (2017)	YouGov	Business reports
Esports 'set for £1bn revenue and 600 million audiences by 2020' (2017)	BBC Sports	Media report
Three things you need to know before investing in eSports (2017)	Knapp, A. (Forbes)	Media report
Esports business 101 – 'the landscape' (2017)	Jacobson, J. M. and Peskin, H. (Esports Group)	Media report

Table 4: Samples of document analysis

3.1.2 Semi-structured interviews

In the second stage, three detailed, semi-structured interviews were conducted. Interviews were selected as the method because they allow exploration of a detailed description within a particular context. Semi-structured interviews are a flexible method for gathering information and developing the interviewees' real thoughts at the same time. Researchers can also collect high-quality data from interviews, as they can control the whole process. The interviewer can explain any uncertainties and correct any confusion regarding their questions and explore explanations if they are unsure about any answers (Drever, 2003).
Yet, as the present study used a qualitative research method, there were issues surrounding the reliability and validity of the findings (which applies to any qualitative research); it is based on interpretations of what the interviewees said and is a 'snapshot' of the understanding of only one moment in time and cannot be duplicated or verified by another person (as is the nature of quantitative research) (Bryman and Bell, 2011).
In this stage, the researcher focused on the operation of the current esports industry, especially the procedures and sectors relevant to esports competitions.

The researcher interviewed people who work in the esports industry and compared the real situation with the information provided by the interviewees.

3.1.2.1 Data collection

Based on the characteristics of the esports industry, sampling of this research could be set into the following categories: (1) staff of game developers and publishers; (2) esports club managers; (3) professional players of esports clubs; (4) esports organisation staff (e.g. BEA and ESL). Several conditions influenced the sample choice: time limitations, the difficulties of contacting people in each category, and the mainline of finding the relationship among each stakeholder is about how a formal esports competition is organised. Contacting professional esports clubs or their players is unlike contacting a simple manager or staff in a normal business office; they are more like the manager and players in professional sports industries such as football and rugby, thus making contact is difficult. Considering the components that are the most relevant to the general operation of the esports industry, the researcher chose to interview esports clubs' manager and the people who work in esports organisations that participates in organising esports competitions. Based on these features, the researcher used chain-referral sampling (also known as snowball sampling) for sample selection. Snowball sampling is a non-random sampling method for obtaining new samples among the existing participants' acquaintances (Goodman, 1961). In the end, three participants attended the interviews, and all are working in the esports industry in China. The first participant has more than 6 years' experience working in the esports industry as an esports club manager. The second participant has more than 4 years' experience working in the esports industry as game publisher and operation committee staff. The third participant has 3 years' experience working in the esports industry as content production company staff. Each participant answered most of the questions with detailed information. The benefit of snowball sampling is that it can make contact with hidden populations in a relatively short time (Bryman and Bell, 2011, p. 192–193). It might cause bias, as the participants were all from a specific area. Yet, as the participants are from different esports industry sectors and the content of their work is different, the bias could be reduced to a certain

extent.

The average length of the interviews was around 60 minutes. Before the formal interviews, all participants were provided a detailed consent form and a thorough explanation of the interview. Table 5 shows an example of the consent form.

Research Consent Form

This research aims to explore the key components of the esports industry and the relationship between them. This research also aims to explore the operation of the esports industry, especially around the esports competition section.

This research has been approved by the appropriate University Research Ethics Committee.

Here are the conditions for the interview participant:

- **The interview will take about 45–60 minutes and will be recorded for further transcription and analysis purposes.**
- **All original recordings will be stored in a secure place such as the encrypted hard drive of Abertay University, and any hard copies of data (such as transcripts, consent forms and printouts of interview transcripts) will be locked up in a filing cabinet or secure box.**
- **All results may be reported or published.**
- **All results are anonymous unless otherwise specified by the participants.**
- **All participants have the right to withdraw from the study or request that their data be removed at any time prior to the submission date of the thesis (February 2019).**
- **All participants have the right to refuse to answer any questions they do not feel like answering.**

Participant: I have read the consent form and received satisfactory answers to any questions I have about this research. I now agree to take part in this research interview: Yes □ No □ Signature: _____ Name: _____ (Block Capitals) Date: _____ **Researcher:** I am satisfied that the participant has given informed consent. Signature: _____ Name: _____ (Block Capitals) Date: _____

Table 5: Research consent form

If the participants had more questions after the briefing, the researcher would provide more descriptions and explanations based on their questions. The researcher started the interview only if the participants accepted the interview application and signed the consent form. The participants also had the right to choose the interview style they preferred: online calls (e.g. Skype or Discord) or online text-based chat (e.g. Messenger or QQ).

The interview questions consisted of overall questions to specific questions. The interviews followed a certain structure, but each interview also had the flexibility to be changed based on the participants' answers and potential topics (to be explored) during the interview. Each interview was divided into three basic parts: (1) What are the main components of the esports industry? (2) How does each of them generally operate in the esports industry? (3) In addition to these main questions, the researcher also asked several relevant questions to enrich the data. Table 6 shows an example of the interview structures and questions.

Example of interview structures and questions	
Main question	**Additional questions**
What are the main components of the esports industry?	• Do you think there are many different components in the esports industry? If so, what are they? • Who holds the most power in the industry?
How does each of them generally operate in the esports industry?	• What kind of role does your organisation play in the industry? • Are there any collaborations between your organisations and others within the esports industry? If so, how does your organisation work with them?
If a formal esports competition has to be organised, what is the process?	• What is the normal process of organising a formal esports competition? • What is the normal process of operating an official match? • What kind of role does your organisation play during the preparation and operation?

Table 6: Example of interview structure and questions

The interviews were conducted in English and Chinese according to the participants' preference to increase the effectiveness of communication between the researcher and the participants. All face-to-face and online call interviews were recorded and transcribed; each online text-based chat interview was transcribed as well.

The researcher encountered several interesting differences of conducting interviews using the techniques (voice interview and online messaging interview): (1) Compared to messaging interviews, voice interviews could help the researcher identify the participants' emotion more easily by hearing the fluctuation of their voices. Therefore, the researcher could build a good trust

relationship faster with voice interviewees than with messaging interviewees; (2) The participants who chose voice interviews could have conveyed more detailed information on one topic without prompting by the interviewer; correspondingly, such participants also could lose focus on the topic more easily by talking about irrelevant information; participants who chose messaging interviews may have spoken less after one question; correspondingly, they focused easily on the topic and would provide more details when the interviewer asked further questions; (3) The messaging interview data were much easier to collect and organise than voice interview data, as the former are already available in text while the latter required transfer to text.

- Ethical considerations

The interviews followed the following rules during the research process: (1) The researcher would inform the participants that participation was voluntary and issued an explicit informed consent form to all participants; the interview would be conducted only after the participants had read and signed the form; (2) the researcher would also explain to the participants that they could withdraw from the research at any time and for any reason; (3) the researcher would respect every participant's contribution and avoided discriminatory, offensive or unacceptable language during the interview; (4) the participants' data would be handled with full confidentiality; (5) there would be no realistic risk for participants to experience physical or psychological distress or discomfort.

3.2 Data analysis

Both stage 1 and 2 of this research used **thematic analysis** as the main data analysis method because of the nature of this study is qualitative research and the feature of thematic analysis is truly suitable for the data of the present study. Thematic analysis is 'a method for identifying, analysing, and interpreting patterns of meaning ('themes') within qualitative data', it 'provides accessible and systematic procedures for generating codes and themes from qualitative data' (Clarke and Braun, 2017). The main reason thematic analysis is one of the most useful tools for analysing qualitative data is that it is flexible not only from a theoretical aspect, but also in other terms such as sample size and

constitution, data collection method and methods of generating meaning. To be specific, thematic analysis can be used to classify different patterns within and across data in connection with participants' opinions, perspectives and lived experiences; thematic analysis can also be used in a 'critical' framework to ask questions and explore the significance of the patterns among personal or social meaning around a subject. Thematic analysis can also be used to analyse different qualitative data sizes and sets, from one or two participants to 50 or more participants, and for analysing homogenous and heterogeneous samples. Thematic analysis is suitable for both inductive and deductive analysis and for deriving both explicit and potential meaning (Clarke and Braun, 2017). The whole process followed Braun and Clarke's six-phase guide, which is an effective framework for guiding thematic analysis. The six phase involve: (1) Familiarization with the data; (2) Generating initial codes; (3) Searching for themes; (4) Reviewing themes; (5) Defining themes; (6) Writing down the research (Braun and Clarke, 2006).

3.2.1 Data analysis of stage 1

The researcher applied thematic analysis to the following 14 documents to explore the important components of the contemporary esports industry. The researcher carefully read the documents several times and gained an overall understanding of the data, then found a series of initial categories related to the important components of the esports industry (Table 7).

Document (year of publication/posting)	**Initial categories**
Raising the Stakes: E-Sports and the Professionalization of Computer Gaming (2012)	• Professional players, • Esports organisations (for managing esports competition), • Game companies, • Events (esports tournaments), Audience and fans.

Esports: The Complete Guide 17/18: A guide for gamers, teams, organisations and other entities in, or looking to get into the space (2017)	• Game publishers, • Event producers, • Esports teams, • Esports players, • Audience, • Esports competitions, • Esports associations, • Media broadcasters.
Korea's online gaming empire (2010)	• Sponsors, • Media and broadcasting, • Regulation organisations, • Esports professional players, • Fans (audience).
The eSports Market and eSports Sponsoring (2017)	• Consumers (fans), • Esports players, • Esports teams (clubs), • Leagues and tournaments, • Events, • Media channels, • Publishers, • Associations.
Good Luck Have Fun: The rise of eSports (2016)	• Esports clubs, • Esports players, • Events (competitions), • Live streaming (broadcasting), Sponsors/sponsorship.
From a closed community past-time to a successful niche market: An analysis of the eSports market (2012)	• Esports teams and professional players, • Sponsors, • Esports associations, • Media and broadcasting, • Casters and commentators, • Amateurs and spectators.
Business Models in Professional Electronic Sports Teams. (2015)	

The digital Korean wave: local online gaming goes global (2011)	• Esports associations, • Media and broadcasting.
The Global Growth of eSports: Trends, Revenues and Audience Towards 2017 (2017)	• Channels (Twitch.tv, ESL TV, etc.), • Publishers, • Leagues, • Events (esports competition events), • Teams.
European esports conference brief (2017)	• Publishers, • Sponsors, • Audience and fans.
Just a game? Understanding the existing and future esports market in the UK (2017)	• Audience and fans, • Broadcasting.
Esports 'set for £1bn revenue and 600 million audiences by 2020' (2017)	• Professional players, • Esports clubs, • Sponsors/sponsorship, • Audience and fans.
Three things you need to know before investing in eSports (2017)	• Esports clubs, • Esports players, • Broadcasting, • Sponsors/sponsorship.
Esports business 101 – 'the landscape' (2017)	• League organisers, • Game developers, • Professional organisations (esports clubs), • Professional players, • Broadcasting platforms.

Table 7: List of the initial categories

However, a component might not be a key stakeholder. For example, several documents considered 'esports events' an important part of the industry, but the organisation of an event needs different stakeholders. Therefore, the 'event' itself is not a stakeholder; the people/organisations that created the event are

the stakeholder. After another round of theme-reviewing, the researcher finally identified the seven initial categories of key stakeholders for stage 2: (1) game publishers, (2) esports clubs/teams, (3) professional players, (4) sponsors, (5) media and broadcasting, (6) audience and fans and (7) esports associations. These themes were compared and validated in the data analysis of stage 2 (semi-structured interviews).

3.2.2 Data analysis of stage 2

The researcher again used thematic analysis to analyse the data of the three semi-structured interviews. The analysis of this stage focused on exploring the process of organising a formal esports competition. By identifying which component is involved (and plays an important role) in the working process, the stakeholder would also be determined. After transcribing all interview records and messages, the researcher analysed each transcript to code data and identify themes. While exploring the relationship between different components of the current esports industry, the researcher also identified key stakeholders of the current esports industry. For example, when the interviewee discussed the general process of making an online esports entertainment program (see Appendices 2), the initial themes of the relationship among the components include partner relationships, buyer-seller relationships, and contractual relationships. These kinds of relationships contain at least two components of the esports industry: one contractual relationship involved the game developers and publishers (Netease and Blizzard Entertainment), a content production company (NeoTV), and broadcast platforms (Douyu.TV and Bilibili). By repeating this process, the researcher identified seven initial categories of the key stakeholders: (1) game developers and game publishers, (2) esports clubs and professional players, (3) operation committees, (4) content production, (5) dissemination (involving different media and channels), (6) third-party organisers, and (7) audience. Then, the researcher compared these eight themes with the seven initial stakeholders of the esports industry identified in the document analysis.

During this process, the researcher reviewed both groups of themes and identified a new set of themes by analysing the similarity and difference

between the two groups of themes and substituting them into real situations (based on the interviewee's answer). Subsequently, the researcher analysed each theme of the new set, and modified, merged and summarised them into the final version. Furthermore, the researcher attempted to discover the relationship among the stakeholders by analysing the 'organise a formal competition' process.

Through both thematic analyses, the researcher explored seven key stakeholders of the contemporary esports industry and their relationships, and these outcomes will be presented in more detail in the Findings section.

4. Findings

Based on the data analysis, the researcher explored a series of data to answer the research questions. Each answer and supporting evidence are presented below.

4.1 What are the key stakeholders of the contemporary esports industry?

Game publisher, esports clubs and professional players, sponsors, broadcasting, esports association and audience were both directly identified in the data analysis of stage 1 and 2. The tournament organisers components, i.e. operation committee and content production, were unique finds from the interview data. The researcher combined data from both stage 1 and 2, then rephrased several themes to one category. The rephrased categories are: rights owners, esports organisations and dissemination. At the end, the researcher identified seven key stakeholders of the esports industry: (1) rights owners, (2) tournament organisers, (3) tournament participants, (4) esports organisations, (5) sponsors, (6) dissemination, and (7) audience. The researcher also found several emerging elements of the esports industry while analysing the documents. The next sections will present a detailed explanation and discussion of these stakeholders.

4.1.1 Rights owners

Game developers and game publishers are the rights owners components in the esports industry.

Most of the documents highlighted ‘game publishers’ as an important component of the esports industry; yet, they overlooked the fact that game developers are also vital. Especially in the current esports industry, most top (esports) game companies are both game developer and game publisher combined. For example: Valve Corporation developed Dota 2 and published it in the North American and European regions; then, another company, Perfect World, published it in China (as the agent publisher). Also, the game developer and game publisher can sometimes be the same company. For example: Blizzard Entertainment developed numerous video games and published them under their own company.

All esports competitions are based on the games designed and published by rights owners. These two sections are the most powerful parts of the esports industry, as they own the complete **intellectual property rights** of the games/software and have complete discretion about the terms and conditions of any use of their games. Therefore, game licensing revenues flow through rights owners. Rights owners can also add their original design to their game content, which could be a unique source of revenue and earning opportunities. For example, Valve Corporation, the game developer and publisher of Dota 2, included an item called 'Battle Pass' that players and fans can buy in-game since TI3 (The International 2013: Dota 2 Championships), and Valve Corporation promised that 25% of the total sales of Battle Pass would be added to the competition prize pool. This decision made a huge difference in the growth and composition of the prize pool. Figure 10 shows the changes in the prize money pool of The International Dota 2 Championships:

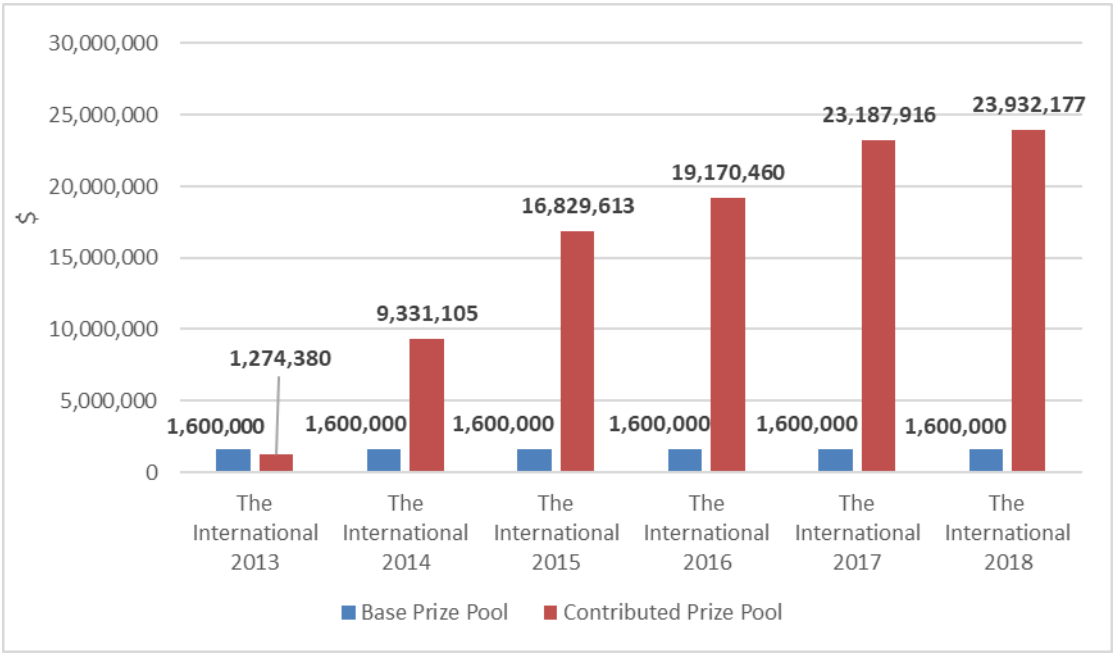

Figure 10: Prize pool of The International Dota 2 Championships from 2013 to 2018

(Dota 2 Prize Pool Tracker, 2018c)

As the figure shows, the size of the contributed prize pool increased rapidly after 2013; in 2018, the 25% sales of Battle Pass in TI8 (The International 2018:

Dota 2 Championships) contributed $23,932,177 to the prize pool (the total prize pool was $25,532,177) (Dota 2 Prize Pool Tracker, 2018c).

Any esports organisation intending to include an in-game source of revenue must work with the game developer. Additionally, the organisation can only receive a stated portion of the profits, and the game developer retains the remainder (Jacobson and Peskin, 2017).

Valve Corporation, Blizzard Entertainment, and Riot Games are currently the three main rights owners in the esports industry, and all of them are US companies (Riot Games was fully bought by Tencent Holdings Limited in 2015; however, Tencent does not have the right to change any decision made by Riot Games in the game developing aspects. Thus, it is still considered a US game development company in this thesis). Table 8 shows that they developed and published the top five games of Top Games Awarding Prize Money.

Top games awarding prize money				
Rank	Game	Prize money awarded ($)	Tournaments	Publisher
1	**Dota 2**	140,159,446	905	**Valve Corporation**
2	**Counter-Strike: Global Offensive**	53,347,884	3222	**Valve Corporation**
3	**League of Legends**	52,056,024	2036	**Riot Games**
4	**StarCraft II**	26,567,909	4817	**Blizzard Entertainment**
5	**Heroes of the Storm**	13,491,741	405	**Blizzard Entertainment**

Table 8: Top games awarding prize money

(Esports Earnings, 2018d)

Moreover, these rights owners have established their own league system, which means that they are game developers and league owners simultaneously. They

may dictate terms to any teams participating in their leagues. All esports clubs and players are required to adhere to their rules and policies if they want to stay in the league and play.

Before introducing the tournament organisers and tournament participants of the esports industry, a brief introduction of esports tournaments is necessary. Tournaments can be in the following main categories: amateur, professional league, and world championship (or world cup). Amateur competitions are most grassroots-level tournaments, such as a competition in a single organisation (such as one university or a net cafe) or an online competition between fans. Professional league tournaments are typically established by rights owners; they are more formal then amateur competitions.

Professional league tournaments attract many fans, as they have a long series of matches and cover most of regions. Generally, rights owners would love to establish their own tournaments league, for example Blizzard Entertainment established the Overwatch League in January 2018 (Erzberger, 2018); Riot Games established 14 professional League of Legends leagues around the world, and professional esports teams/clubs compete in different regions and earn world rankings to win a ticket to the world championship.

World championships are typically annual tournaments; they are magnificent events for professional esports players, esports clubs and their fans all over the world. This grand offline event attracts attention from not only fans but also sponsors: in 2017, the official partners of the League of Legends World Championship were Mercedes-Benz, Intel, Logitech, L'Oreal Paris Men Expert and Yili (Sina Sports, 2017). For now, the total prize pool of an official esports competition can be millions of dollars. Also, the tournaments now take place all over the world in big arenas with large audience. For example, the 2017 League of Legends World Championship finals was held in Beijing National Stadium (also known as ‘the bird nest’), which is the same venue that hosted the 2008 Summer Olympics.

Tournaments are mainly built up by operation committees and content production. Yet, they also need cooperation from the rights owners, tournament participants and broadcast organisations.

4.1.2 Tournament organisers

This section includes operation committees and content production companies. Operation committees include the companies and organisations with the ability to obtain authorization from rights owners to organise a series of formal esports tournaments; the focus of their job is to design and carry out the plan of operating formal esports competitions. Content production includes the companies and organisations that focus on producing relevant content for esports competitions and events, and they typically work with operation committees. There are four main tasks of content production: (1) produce content for formal esports competitions. For example, in an official Dota 2 competition, the content production company and organisation need to set the competition schedule, prepare the playing field and provide corresponding hardware and technical support. (2) Produce content for relevant esports events such as online entertainment programmes. For example, in 2016, sponsored by NetEase and Blizzard Entertainment, NEO TV (a Chinese content production company) undertook an esports talent show called '*中国好星际*' ('This is StarCraft II in China'), which is currently in its fourth season. This online show refers to the mode of typical talent shows to a certain extent; 16–24 grassroots StarCraft II players will compete with examiners/evaluators and the winners would be picked into four different mentors' teams. After a series of matches between teams and players, the final top two players will be eligible to join China's StarCraft II Gold Professional League (GPL). (3) Esports tournament data analysis: Relevant companies and organisations will provide data statistics and analysis of real-time (in-game) data (e.g. comparison of line-up strength) and total data (post-game) (e.g. player statistics of the last match or a whole season). (4) Commentators: Also known as 'shoutcasters' or 'broadcasters', they 'sit(ting) at their microphone, broadcasting to a room raptly watching in-game action or speaking to a network or television feed, they provide information about the game and players, racing to keep up with the action occurring on screen' (Taylor, 2012, p. 181–182). As esports tournaments attracted increasingly bigger audiences and became more professional, commentators began to emerge in the public eye. There are three types of commentators: (1) Play-by-play commentator: They call the action during live

gameplay. They raise the atmosphere and explain how the match is going and provide basic knowledge of the game to make it easier for viewers to follow and enjoy the tournament; (2) Game Panel commentator (or analyst, known as 'colour caster'): They typically appear before the game begins (to provide a brief introduction to each team and their members, present data and statistics collected over time and share their options and predictions) and after the game ends (to offer viewers a deeper understanding of the tactics and outcome of the match); (3) Hosts (and interviewers): The host typically engages the audience from the stage, and reports to the Game Panel both before and after each match or level is complete. They also play the role of the interviewer, posing questions to teams before and after play, and may interview the winners and losers after the match, sometimes prompting emotional responses from the competitors (Bednarski, 2017). Being a professional esports commentator is not easy; commentators need to have several skills and abilities, for example: professional and deep understanding of different games; good communication and presentation skills; and self-confidence and passion. Most esports commenters are past professional esports players or gaming celebrities, or just game enthusiasts. A famous esports commentator can garner $1300 in one day at an event (Bednarski, 2017).

With the development of the esports industry, operation committees and content production companies have also developed to become more professional and comprehensive. More often, companies begin to do operation committee and content production work at the same time.

4.1.3 Tournament participants

This section can be separated into two main parts: esports clubs and professional players.

- **Esports clubs**

Esports clubs are another important part of the esports industry. Domestic companies, international companies or groups of people playing together under a common team name are the most prevalent corporate structure of esports teams and clubs. Subsidiaries, parent companies and affiliated companies may also be involved in the clubs' organisational structure (Knapp, 2017). Esports

clubs can also be funded by their players, for example: a famous esports club called Team SoloMid (TSM) was funded by Andy ‘Reginald’ Dinh (who was a former League of Legends TSM player) in September 2009 (Dave, 2016). Furthermore, the interviewees also mentioned two special funders of esports clubs and teams: advertisers themselves (e.g. the TongFu esports club founded by TongFu Porridge) and second-generation magnates (e.g. Invictus Gaming, founded by Sicong Wang, the son of Jianlin Wang who is the richest man in Asia).

The clubs recruit esports players for their services; in exchange, it supports them from different angles. Basically, the organisation pays a salary (weekly, monthly or annual) to their players, offers them a training base or other housing options, including food support and utility bills such as electricity and gas. Furthermore, the team/club will provide the relevant gaming equipment, professional coaches and data analytics experts; some also provide live streaming contracts, team doctors and even psychological counselling. Sponsorships are the largest source of revenue for esports clubs. Technology, traditional sports and entertainment industries have invested millions of dollars into esports clubs to recruit new talents and support the continued development of the clubs. However, such funding is not really the ‘revenues’ earned by esports clubs, as the investments are aimed at helping the clubs honour their financial obligations and are typically provided in exchange for a shareholder interest in the entity (Jacobson and Peskin, 2017). Prize money is another source of revenue for esports clubs; clubs may receive 5–10% of the team’s prize money and/or players’ competition winnings. Most esports clubs also sign live streaming contracts with online broadcast platforms to obtain funds. The sale of merchandise is another additional means by which esports clubs obtain income.

Other than the external information that can be found in different literature and resources, the interviewees also shared internal information about the potential relationship between esports clubs and professional esports players. Before the interview, the researcher believed the relationship between esports clubs and their professional players would be the same as that between employers and

employees in the business context, as professional players and employees both sign contracts with their employers. Therefore, the professional players would be at a disadvantage in this working relationship; however, the interviewees offered an opposite point of view during the interviews. Participant 1 claimed that when professional players achieve a certain degree of fame (basically, when they have enough ability to draw more attention from the general public and sponsors to the esports club), they would wield more power than their manager or even their original sponsor in any business negotiations. On the contrary, the grassroots professional esports players or players who have not become famous yet are the disadvantaged groups in their clubs.

- **Professional players**

All esports competitions require competitors to be professional players; without the players, there would be no competitions. Being a professional esports player does not involve only playing video games as entertainment; it requires a number of different abilities and skills. Professional esports players not only need to train constantly to maintain their high performance, but also to care about different tournament announcements (e.g. how, when and where to join the competition), as well as other issues such as visa application and affording travel costs. Besides, most current esports matches require team competition instead of individual competition. Thus, most professional players join different esports clubs because they can receive more support from the clubs. Professional esports players have two main features: (1) Young age: The average age of esports players is around 20 years (in China) and 24–26 years in Europe (Campbell, 2015; Chen, 2015). Most professional esports players (especially MOBA game players) are required to have fairly high-level gaming skills, reaction speed, long-period focus and the ability to handle multiple actions at the same time; therefore, the ‘golden years’ of professional esports players are limited 18–25 years to a certain extent, which is certainly a short period compared to that of employees in business company or traditional sports athletes (Taylor, 2012, p. 91; Liang, 2016). (2) The nature of players’ jobs: Professional esports players need to and have to play computer games; however, it is not as easy as normal people portray. As professional players, their daily training would involve playing the same computer games (based on

the corresponding competition events, for example: Dota 2, League of Legends, Overwatch) for around 8–12 hours (or even longer) (Jacobs, 2015; Liang, 2016)). Table 9 shows the timetable of a 22-year-old professional League of Legends player (BBC Sport, 2017).

11 a.m.	Get up and prepare for practice (playing games or going through replay reviews)
12 p.m.	Lunch
3 p.m.	Team practice (usually three games)
6 p.m.	Dinner plus an hour's break
7 p.m.	Play more games (usually three games)
10–11 p.m.	Free time but mostly playing more games until late
2–3 a.m.	Go to bed

Table 9: Timetable of a League of Legends professional player
(BBC Sport, 2017)

Successful esports players are just like basketball stars or football stars, they have vast numbers of fans and earn a lot of money from winning tournaments, advertising endorsement, and signing contracts with online broadcast platforms. For example, Kuro 'KuroKy' Takhasomi, a German Dota 2 professional player, has earned more than $4 million in the past 7 years, is ranked top in the highest overall earnings, and is ranked first in the highest earnings for players from Germany (Esports Earnings, 2018e).
Yet, behind this glamorous side of fame and being surrounded by media and avid fans, most professional esports players would prefer to focus on game-playing itself and being the best in the competition instead of being a 'star' in front public (Participant 1).

4.1.4 Dissemination

This section concerns esports promotion and propaganda; compared to some studies that only focus on broadcasting, the present work considers other aspects of esports dissemination. Esports media, social media and broadcasting are the main approaches of esports dissemination.

- Esports media includes different websites that focus on esports content, for example The Esports Observer (esportsobserver.com) focuses on presenting copious amounts of news and insights on esports business.
- Social media is a popular means of esports fans to get close to their ‘idols’, i.e. professional esports players, Also, most parts of the esports industry use social media platforms, from sponsors to rights owners, esports clubs and esports organisations. Different regions have different social media platforms, for example, Twitter, Weibo and Facebook. On these platforms, a famous professional esports player may have a large crowd of fans. Søren ‘Bjergsen’ Bjerg, a League of Legends professional player, has 1.36 million followers on Twitter, which is even more than the followers of some English national football team players (e.g. Jesse Lingard with 1.25 million followers and Nick Pope with 15.5K followers) (Bjerg, 2019; Lingard, 2019; Pope, 2019).
- The broadcaster is a crucial part of esports in terms of publicity and propagation. It includes live televised broadcasts of tournaments, live streaming of the gaming content and the recent updating to a 24/7 esports television channel. Television broadcasting is an exciting advance in esports broadcasting. In 2017, Sportsnet (the largest sports media brand in Canada) signed an agreement with ESL for a 24/7 channel to entirely broadcast content by ESL’s esportsTV (Ashton, 2017). Furthermore, ESL signed an inflight entertainment deal with Emirates flights last year stipulating that ESL esports content can be viewed by all passengers on board from March 2017 to June 2018 (ESL, 2017).

  Apart from television broadcasting, online live broadcast platforms (e.g. Twitch and YouTube) have contributed greatly to introducing more professional gaming information to audiences. Users of each online broadcast platform can choose from different live streams based on interest, for example: online channels broadcast can about competitions, normal game play, gaming tutorials and team practice. The worldwide viewers for GVC (Gaming Video Content) reached 666 million in 2017, more than twice the population of the USA (Christensen, 2017). On YouTube, gaming has already become the second most popular channels with 77 million subscribers (SuperData, 2017b). It has also been predicted that global

audience numbers will continue to increase by 21% from 2017 to 2021. Besides, the GVC audience numbers are greater than that of HBO, Netflix, ESPN and Hulu combined (SuperData, 2017c).

One point that should be noted when understanding this section: these means of dissemination are two-way instead of one-way. In the process of transmitting content to the audience, these channels also obtain effective information through the audience's response (e.g. comments, suggestions and viewing rates). These channels can also change their broadcasting mode, adding or reducing delivery channels, and change the programming/reporting content based on these audience responses.

4.1.5 Sponsors

Sponsorship is the biggest revenue stream in esports, bringing in much more than is raised by the media, advertising, merchandise and ticketing, as sponsors cooperate with the most parts in the esports industry. Sponsorship exists between sponsor and esports clubs, esports professional players, esports organisations even rights owners.

In 2017, sponsorship accounted for 38% ($266 million) of the global esports revenue stream (Newzoo, 2017b). The type sponsor can be vital, for example: gaming hardware manufacturing companies (e.g. Razer and Gigabyte), beverage companies (Red Bull, Coca-Cola), global automobile marques (Mercedes-Benz and JEEP) and other types of companies such as Olay and Gillette. Sponsors not only play an important role for esports clubs but are also an indispensable part of the preparations for esports tournaments. For example, in 2018, only one company in China invested around $8.5 million into esports competitions for title sponsorship and normal advertising (Participant 2). Besides, there has been an interesting trend in recent years, where an increasing number of traditional sports clubs and players have begun to invest in esports clubs and players. Pro NBA superstar Shaquille O'Neal also invested in NRG eSports in 2015. This phenomenon is not confined to only basketball teams and players: football clubs have also invested in esports clubs, for

example: the German football club FC Schalke 04 signed Elements (a League of Legends team) in 2016 (East, 2016a).

4.1.6 Esports associations

There are different types of esports organisations. Esports association and third-party organisers are two main types of esports organisations.

- Esports associations are typically a supporting organisation for esports clubs and teams, even for industry. Considering esports associations' scope of involvement, there are international and national (or regional) associations. For example, the International Esports Federation (IESF) is a global esports association that started out as an association with nine member nations in 2008 and has now expanded to over 46 nations covered. It is currently the biggest international esports organisation, and 'works consistently to promote esports as a true sport beyond language, race and cultural barriers' and their obligations include 'hosting international esports tournaments, expanding our range of member nations and establishing standards for referees, players, certifications, titles and competitions' (IESF, 2018). KeSPA is a South Korean esports organisation established in 2000; it is approved by the South Korean Ministry of Culture, Sports and Tourism, and managed 25 esports in the country in 2012. As a government-approved esports organisation, the official goal of KeSPA is to make esports an official sporting event and to consolidate the commercial status of esports in all areas (TEO Professional, 2017). Its government base makes KeSPA a special example of a successful esports association. It offers a series of supporting activities that non-government–based esports associations would not have, such as policy supporting and special treatment.
- A third-party organiser such as ESL or Major League Gaming (MLG) is typically a professional esports organisation or esports company that organises esports competitions worldwide. Third-party organisers can sometimes be viewed as the operation committee or/and content production.

4.1.7 Audience

The audience is also crucial to the whole esports industry. If nobody pays to play games or watch esports tournaments, there would be no revenue for producing games or competitions. Worldwide esports viewership increased from $20 million in 2011 to $134 million in 2015 (IACG, 2017).

The audience (which includes fans) can form a large proportion of revenue in the esports industry, as it has strong purchasing power. According to the 2018 Newzoo global esports market report, in 2017, the most watched event on Twitch was The League of Legends World Championship, which spanned 49.5 million hours; the audience contributed $59 million in ticket revenues to the esports industry (up from $32 million in 2016) (Newzoo, 2018).

4.1.8 The emerging element of development of the esports industry

During the study, two new derivative elements of the esports industry drew the researcher's attention: **esports charity** and **esports education**. These two derived concepts have emerged in the esports industry during the past 2 years. On September 2018, Blizzard Entertainment raised more than $12.7 million for the Breast Cancer Research Foundation (BCRF) by selling a Pink Mercy skin in Overwatch, which is the largest donation by a company within 1 year in BCRF's history for the last 25 years (Blizzard Entertainment, 2018). Other than rights owners, esports clubs and their professional players have also showed their willingness to do charity: in 2018, the famous League of Legends player Lee 'Faker' Sang-hyeok announced that he would be donating his October streaming revenue to the United Nations Foundation; his employer, the esports club SK Telecom T1 has also cooperated with the organisation (Porter, 2018). Esports charity has a strong link with rights owners, as they have series experience of contributing to charity. This is encouraging, as more components of the industry would like to join such charity events.

On esports education, not only have individual researchers begun to pay attention to the study of esports, universities have also begun to do so. In January 2017, the University of York and ESL announced a world-first collaboration in esports teaching and research (University of York, 2017). In July 2017, the University of Leicester worked with ESL to develop a unique

esports course for a master's degree (Payne and Martin, 2017; University of Leicester, 2017). Furthermore, Staffordshire University offers a bachelor's degree in esports that includes 16 courses (e.g. competitive gaming culture, esports integrity regulation and risk, esports analytics) relevant to the esports industry; they also offer master's degree of esports study (University of Staffordshire, 2019a; 2019b).

As more and more higher education organisations have begun to put more effort into esports teaching and research, this new trend of esports education has great potential to become a derivative industry of the esports industry, just as how esports is relatively a derivative industry of the digital game (especially online games) industry.

4.2 How do these key stakeholders operate/transact with each other?

After interviewing three subjects who work in the esports industry, the researcher explored the general working relationship and process (which focuses on organising formal esports tournaments) between stakeholders in the esports industry. Here, seven key stakeholders all take part in the cooperation and play different roles. The next sections will explain and discuss how the stakeholders operate with each other. Appendix 2 contains some parts of the interview transcripts based on the research questions.

4.2.1 How is an official esports competition organised?

The exhaustive process of organising an official esports competition is more difficult than the researcher hypothesised. In reality, there is much behind-the-scenes and analysis work.

Participant 3 described the detailed process of how formal esports competitions are planned and run from the beginning; the progress can be simplified as a cyclic process: rights owners → sponsors → organisers → esports clubs and professional players → dissemination → audience. Also, the whole process can be separated into seven stages.

- Stage 1: Analysis stage. Here, the rights owners will assess the possibility and feasibility of an esports competition and then decide whether to set up

the project. It should be noted that rights owners do not make arbitrary decisions in holding competitions; they will consider and analyse a series of information and data, such as the whole market data of the esports game, the scale of the esports game league, and the strategic objectives of the project.

- Stage 2: Finding sponsors. Here, the rights owners will draft a budget of the project based on the expectation objective of the new esports competition and establish different sponsorship levels, then start to attract investment. The levels of sponsorship are based on the sponsorship rights, for example, the highest level is exclusive naming rights, and the lower level is designated supplies rights.
- Stage 3: Invitation to bid to find an appropriate supplier. Different tournament organiser companies and organisations (including both operation committee and content production companies and organisations) will design a rough competition program/plan based on the rights owners' requirements; after comparison, the rights owner will choose the most suitable organiser. The plan should include but is not limited to scenic design, creative processes and creative techniques.
- Stage 4: Repeated process of the chosen supplier (operation committee) forming the implementation plan of the competition and discussing it with the director of the rights owners to establish a final plan. The final plan should include but is not limited to stage schematic diagram, material design, creative process, and creative stream technology.
- Stage 5: Series of preparations according to the final plan. Here, the suppliers' tasks should include but are not limited to preparation of the organising arena, participants, broadcast equipment, publicity, broadcast platform and different material production.
- Stage 6: Operating of the official competition. During the period, rights owners need to ensure that each sponsor receives their sponsorship rights and sustain publicity for the competition. The operation committee needs to guarantee that the competition will progress safely and smoothly. Also, the broadcast platform will formally participate at this stage and carry out their work.

- Stage 7: Esports fans and audience watching the match (fans must be the audience, but the audience might not be esports fans). This stage also includes a series of business activities between the fans (and audience) and other key stakeholders. For example, the fans (and audience) would receive relevant information about the competition through the dissemination sections; the advertisement and publicity from rights owners and sponsors would also influence the buying behaviours of the fans (and audience).

4.2.2 How is an esports entertainment programme created?

The operation committee and content production sector are in fact slowly becoming the same organisation that has both abilities to do relevant work. Participant 2 shared his own experience about how an esports entertainment online programme is produced, and the process of preparing and operating an esports entertainment programme is relatively the same as that of creating an esports competition. The process also starts from the analysis stage of the rights owners, then they establish the project, find sponsors, decide on the suppliers, and work with them until the end of the programme. In his example, feasibility analysis of the esports entertainment programme less complicated than that of an esports competition; the decision of setting a programme and the relevant suppliers is mostly based on the rights owners' thoughts and preferences. The preparation and operation of an esports entertainment programme focuses more on the programme sequence, scenic design, photography method and post-production instead of organising a large arena or offering elaborate creative techniques.

Based on the participant's description, the researcher found that creating an esports competition and an esports entertainment programme have nearly the same flow. The main difference between them is the working content based on the project/programme's features. In addition, the participant mentioned a special situation wherein rights owners were unable to find any sponsors during the finding sponsors stage, i.e. stage 2. Here, the rights owners eventually paid all related expenses as they needed the programme to attract more attention from the audience and general public to their games. In the general situation, however, the project might be halted at this stage.

Furthermore, the researcher noted that the process of creating formal esports competitions or esports entertainment programmes is more akin to producing a business product for the rights owners, as there are clear procedures to follow for both preparation and production. Participant 3 also claimed that the trends of producing esports competitions in the current situation is to frame it as an entertainment program, which makes the fusion of operation committee and content production possible and reasonable.

4.3 Mapping the contemporary esports industry ecosystem

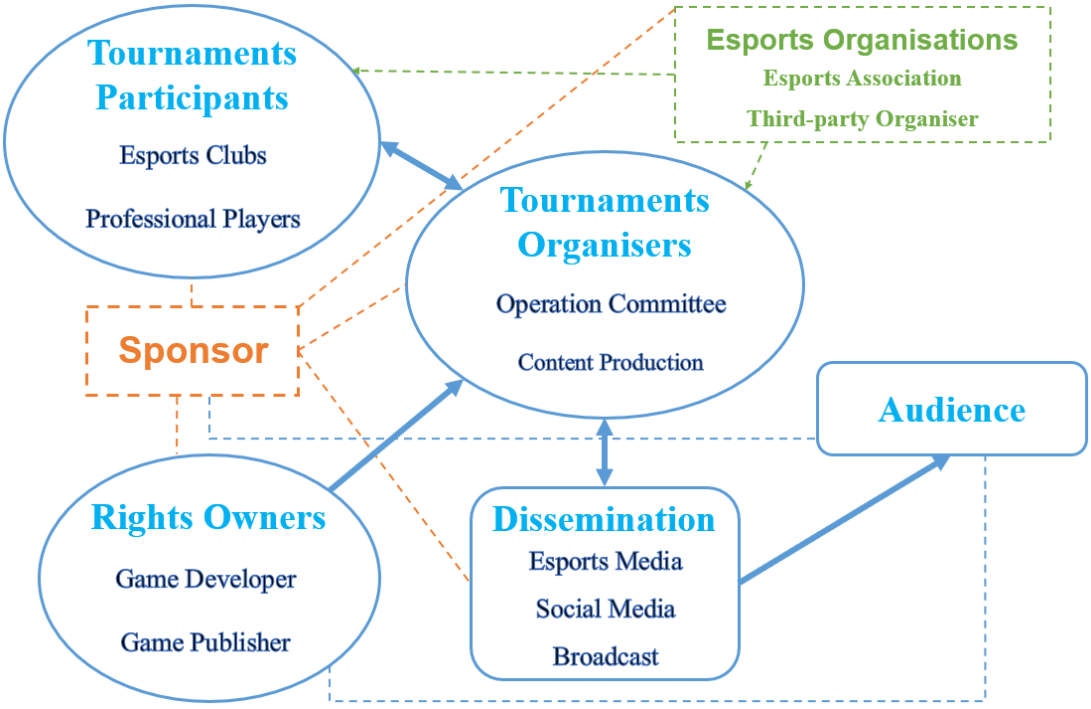

Figure 11: Map of the contemporary esports industry ecosystem

Based on the earlier findings, the researcher developed a map of the contemporary esports industry ecosystem. The basic understanding of this map is as follows:

- It contains seven key stakeholders of the esports industry;
- It shows the main working relationship between these stakeholders in the esports industry (solid blue line) around the question of 'how to create an official esports competition', and the potential relationship between each

stakeholder (dotted line);

- It can also be separated into several relatively independent sections for understanding the specific value flow within the esports industry.

Besides, this new map is based on Hein's and Carvalho's electronic sports relationship diagram, and extends and clarifies it. In the present map of the contemporary esports industry ecosystem, the researcher made the following changes based on the series of research:

- Added and emphasised game developers and game publishers as the most powerful components in the esports industry, and combined them in one section, i.e. rights owners, because most game developers and publishers refer to the same company in the esports industry;
- Summarised 'players' and 'teams' to 'tournaments participants', as professional players and esports clubs are bound together in most cases. In recent years, almost no player has participated in competitions as an individual, even Hearthstone players (most are individual professional players when they joined Hearthstone tournaments) began to join esports clubs in the recent 2 years;
- Added another important component: tournaments organisers (which includes operation committee and content production) into the esports ecosystem, as they are crucial (for rights owners) when preparing esports tournaments;
- Moved 'casters' to the 'tournaments organisers' section, as 'find commentators' is one process in tournament organisation; furthermore, an increasing number of famous commentators have signed contracts with content production companies, as the company may offer more opportunities during tournament preparation.
- Extended 'social media' to 'dissemination', as there are not only social media, but also other media sections (esports media, broadcast platform) for disseminating esports content;
- Add 'esports organisations' to the esports ecosystem, which includes both associations and third-party organisers;

- Regarding the distribution channels, this study focuses on 'how to create an official esports competition' while building the esports ecosystem. Thus, the distribution channels are less significant. Also, the main income in the industry is from sponsorship and not through distribution channels.

4.3.1 Examples of independent sections within the esports industry ecosystem map

Several small sections show relatively independent value flows between a small group of stakeholders within the esports industry ecosystem map.
Based on the participants' sharing of their working experience in the esports industry, the researcher chose two relatively important aspects (esports clubs and third-party organisers) to show the value flows in the daily workings of the real esports industry.

4.3.1.1 The value flow around esports clubs

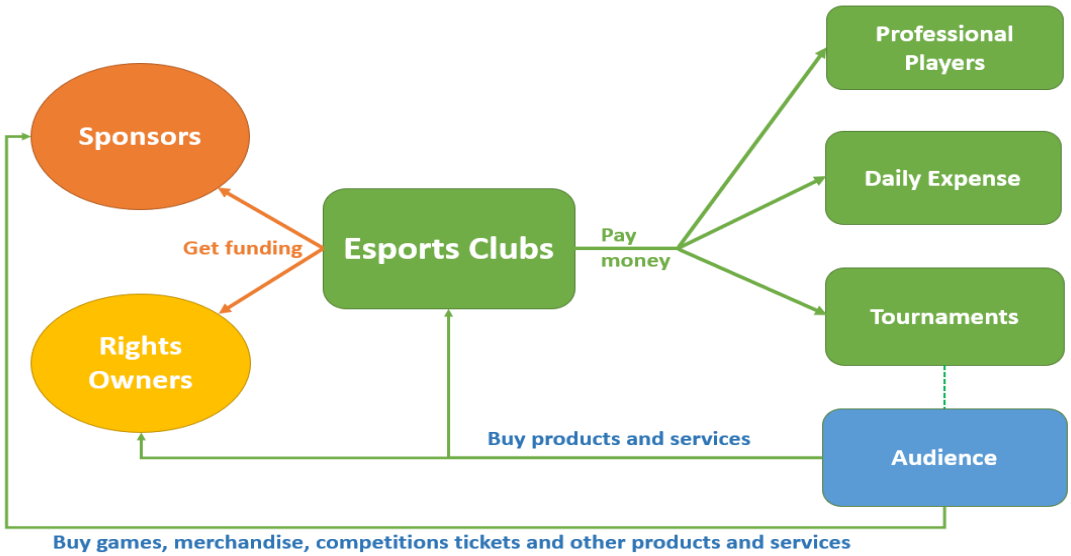

Figure 12: Value flow around esports clubs

The value flow around esports clubs can be simplified as shown in Figure 12:

- Esports clubs find sponsors (and sometimes rights owners) to obtain funding;

- The club uses the money to pay their professional players and staff, maintain daily operations, and pay for other actions such as flights for joining esports tournaments;
- The broadcast platform shows the clubs' and their players' performance to the audience, creating a certain publicity effect;
- Then, the consumption of the audience and fans brings the value back to the sponsors, rights owners and esports clubs though different business activities, for example, purchasing the rights owners' video game(s), and the sponsors' and esports clubs' merchandise.

4.3.1.2 The value flow around third-party organisers

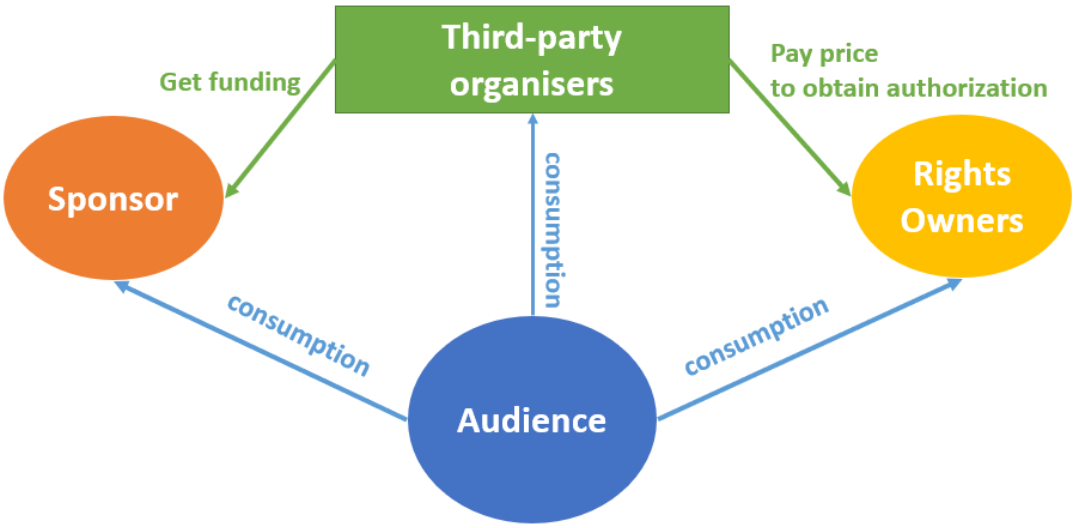

Figure 13: Value flow around third-party organisers

The value flow around third-party organisers typically exists in the process of organising and operating a third-party esports competition. This cycle can be simplified as shown in Figure 13:

- Third-party organisers obtain investment and funding from sponsors (as typically the core interests of a third-party esports competition is the sponsors' advertising effectiveness). Also, the organisers will pay a fee (money or other value) to rights owners for authorization.

- Then, the organisers organise and operate the esports competition.
- The broadcast platform broadcasts the competition and creates a certain publicity effect.
- Then, the consumption of audience and fans brings the value back to the sponsors, rights owners and the third-party organisers.

5. Discussion

In the previous 10 years, the number of academic studies on esports has increased. These studies cover different disciplines, such as sports science, business and media studies. However, most of these studies did not focus on the whole operation and ecosystem of the esports industry. In the present study, the researcher used document analysis and semi-structured interviews to explore the important components of the current esports industry and how they operate in real-life situations. The researcher explored seven key stakeholders of the contemporary esports industry and developed an updated and inclusive map of the current esports industry ecosystem (based on the operation of creating an official esports competition among these stakeholders). The identification of the seven key stakeholders mainly extend and clarify the studies of Hein (2012) and Carvalho (2015). The researcher also combined the studies of other researchers such as Jin (2011) and Jacobson and Peskin (2017) and original interview data to present a detailed, targeted and current result to illustrate the real situation of the contemporary esports industry. The researcher also analysed the original interview data and discovered the general cooperation process among the key stakeholders and presented real-world examples. The contemporary esports industry ecosystem map is based on the findings from the literature and interviews. In addition, the present study discussed the complex feature of esports by reviewing and evaluating Guttmann's models of modern sports (2004) and a series of studies of the digital game industry (Kerr 2006b, 2017; De Prato et al., 2012), then concluded that the features of esports are suitable for the modern sports context. Furthermore, esports is also a type of derivative industry of the digital game industry (as the key concept of esports is playing digital games). Besides, the researcher found that creating esports tournaments and entertainment programmes are more akin to producing a product for rights owners instead of merely designing a game event. The present study combined the view of both esports industry insiders and outsiders and presented an overall picture of the real situation of the esports industry, which fills the gap in current esports studies to a certain extent. The results are based on the real experience of people who work in the relatively well-developed esports industry, which would

be suitable and helpful for developing the esports industry in a wide range of countries.

However, the present research has several limitations. It did not discuss the relationship between the esports and media industries. Also, the sample is relatively small compared to the massive esports industry; the researcher could only cover the perspective of operation committee, content production and partly rights owners. Regarding the ecosystem map, the real situation of different regions could yield different versions. Moreover, most of the interview data are based on the situation of the Chinese esports industry, as the participants were from China, where esports is relatively well-developed. Although the general process of work (in the esports industry) should be the same in the global range, limitations and bias might persist in some points of view of the present study.

Numerous further works can be performed based on the present ecosystem map. For example, more attention should be paid to the emerged derivative services and products, especially esports education. It has great potential to become one of the important parts or even the next derivative industry of the esports industry in the future. The researcher plans to conduct a series of in-depth interviews of each esports industry stakeholder and explore the power hierarchy between them. The researcher could also compare the present map with the situation of the esports industry in different regions and explore the differences and similarities, then develop a specific map for that region, for example, the researcher could continue the research of developing a complete version of the map for the UK. Moreover, the researcher plans to identify different means of improving the cooperation between stakeholders and to attempt to improve the development of the UK esports industry.

6. Conclusion

In this qualitative study, the researcher discovered seven key stakeholders of the contemporary esports industry and the operation among them, and

presented an inclusive and updated map of the esports industry ecosystem by conducting a series of thematic analysis.

The findings could benefit several groups. From the public aspect, this study presents a general idea of how the esports industry works in reality and shows that esports has become an industry and that the pace of its development is quite fast. This study covers basic knowledge of the esports industry and uses examples from real work to make it easier to understand; even people with no understanding of esports can understand most of the content after reading. The researcher hopes that this study can improve general public understanding and awareness of esports and the esports industry from a positive perspective.

From the esports industry aspect, this study would help stakeholders understand each other better. Moreover, it also contributes to building a practical and sustainable UK esports sector that is competitive with other European countries. The present study also has application and reference value, to a certain extent, for all countries with a relatively slow pace of esports industry development. Some parts of the esports industry can use this study as a guide to understand and improve cooperation with their partners. It would also help the public sector to establish relevant policies for the esports industry.

From the academic aspect, this could be a fundamental study for other researchers who are also interested in the esports industry. For researchers who do not know much about esports, the present would provide better understanding of the basics of esports and the esports industry. For researchers who understand esports to a certain extent, the present study provides a good map to choose the direction they would like to focus on and offer some internal examples that are typically not easy to find in reports or papers.

The researcher also hopes that this map will become part of a common language for comparisons of the esports sectors in different countries and contexts.

Appendices

Appendices 1: Research Ethics Approval form

Reference No.	**1592**
State	**Full approval 22.01.18**
Name	MO JIA
Student/staff number	1704120
Abertay email address	1704120@abertay.ac.uk
Is this a revised re-submission?	No
Name of Programme (if applicable)	MbR
Module Code	PG
Project Title	Exploring the most effective motivational techniques for UK esports professional players
Main aim of project	The aim of this research is to explore the esports industry structure in the context of earnings and rewards for UK esports clubs and professionals.
Proposed start date	01/12/2017
Proposed end date	02/10/2018
Site of research	Library
What is the nature of this research?	Sensitive emipirical research
Name of external ethical approval body	
Status of external approval application	
External ethics application reference	
Date submitted	
Special issues with biological samples	D4 Research involves human participants
Does the project involve human participants in any way, including	Yes
E1You will describe the main experimental procedures to participants in advance, so that they are informed about what to expect?, E2You will inform participants that their participation is voluntary?, E3You will obtain explicit informed consent for participation, or assent in the case of questionnaire use?, E4If the research is observational, you will ask participants for their consent to being observed?, E5You will tell participants that they may withdraw from the research at any time and for any reason?, E6With questionnaires you will give participants the option of omitting questions they do not want to answer?, E7You will tell participants their data will be treated with full confidentiality and that, if published, it will not be identifiable as theirs unless they explicitly consent to be identified., E8You will debrief participants at the end of their participation (i.e. give them a brief explanation of the study)?, E9You will NOT deliberately mislead participants in any way?, E10Your study will NOT involve a realistic risk of participants or	
E11 Will the project involve members of any special groups listed below, or another vulnerable group?	
Please describe briefly how you would plan to execute your project, giving details of your proposed methodology, and then progress to	
G1Aims of study and Rationale	In esports industry, UK is fall behind other European countries in terms of revenues. The aim is to find out the reasons behind this situation and suggest the ways of improving it. This study will help to motivate esports professional players to achieve the new heights in
G2External Partners	NA
G3Expertise	I have good expertise of interviewing for research purposes.
G4Participants	The participants will be the esports professional UK players. The study will utilise interviews as the main data collection methods, there will be two types of interviews: in-depth and semi-structure interviews. The in-depth interviews will be used at the beginning of the research to discover the existing rewards schemes used in industry. The number of participants for in-depth interviews will be 5, representing the largest esports clubs in UK. No any demographic information, except gender and location, will be sought. The semi-structure interview will be used at the later stage of the research to identify the dominating rewards schemes used in different UK esports clubs. The number of participants
G5Materials &/or apparatus	The themes will be generated in the initial in-depth interviews, with focus on rewards and motivation of UK esports professional players.
G6Procedure	The initial in-depth interviews will be analysed using thematic analysis, which then will be matched with themes deriving from literature review. This will serve as the basis for semi-
What ethical issues (if any) does your project raise? How will you mitigate against these ethical issues?	I will inform about participants that the participation is voluntary and will obtain explicit informed consent for participation. I will also tell participants that they may withdraw from the research at any time and for any reason. Participants data will be handled with full confidentiality. There is no a realistic risk for participants to experience either physical or
I confirm that:	I am aware I need to submit a Risk Assessment and will do so before commencing the proposed study. (Note: you must follow whatever procedures your School has in place for the review and approval of risk assessment. Seek advice from your supervisor). Note, all studies except Literature Reviews must complete an appropriate risk assessment prior to commencing the study., I have read and understood Abertay University's policy on research ethics ("Ethics: a Quick Guide"), the Abertay University Health and Safety Policy, and any equivalent School Policy., For each working location (including university facilities and your home), I will identify what to do and who to contact in case of emergency, and will make myself aware of any existing safety, First Aid or emergency procedures., Any data collected from experiments will be stored securely within a week in Abertay University facilities following the guidance set out in the University's Data Storage Policy., I understand that it is my responsibility to ensure compliance with any relevant regulatory or legal requirements (such as data protection legislation, stored tissue regulations, animal experimentation licensing, etc)., The proposed study will not discriminate against participants on the grounds of race, sex, religion or belief, sexual orientation, disability, pregnancy and maternity, gender reassignment, marriage and civil partnership, and/or age., I have completed all sections of this form fully and accurately, I understand that should I receive a Conditional Approval, I will need to comply with the Conditions set out in the Decision email., I understand that should I
Please also confirm that:	Your supervisor will approve any materials that you provide to human participants before use (e.g. consent forms, questionnaires, interview questions). The supervisor will be sent a
School	AMG (Arts, Media & Computer Games)
Explain what has changed	
Supervisor email address	w.huber@abertay.ac.uk

Appendices 2: Part of the transcripts from the interviews

- **How to make formal tournaments happen?**

I will use LPL as an example. At the beginning of the year, Tencent and Riot will analyse the scale of LPL based on the present data of the whole [League of Legends] market, for example, the number of newly joined players, the number of total League of Legends players, the needs of Riot users…
The content of the scale of LPL competitions include these kinds of things: 'How many competitions should be set in online or offline mode?'; 'Do we have enough money to support each esports club to take transport [mostly flight] to compete across the whole of China?' etc.
During the analysis, Tencent and Riot also need to consider if LPL could achieve the strategic objectives – localisation. Localisation is the biggest current goal; Tencent and Riot set a phased objective of LPL's localisation – in the first year, they separated the division into East and West, in the second year they sent seven different League of Legends professional teams to each division, and in the third year, they hope to promote it to a large range. The final goal of LPL's localisation is that Tencent and Riot wish to make the competition system of LPL just like a traditional sports competition's 'home and away system', such as the NBA and the English Premier League [EPL]. After all this analysing and evaluating, they will decide to set up the project, which is to keep LPL running into the next season…

Then, Tencent and Riot will calculate a draft budget of LPL based on the goal they expect of the coming season. The expected goal can be: achieve the phased goal of localisation of the coming season successfully, the number of League of Legends teams that would join the coming season, achieve a series of relative propaganda of LPL such as buying the banner of a popular online broadcast platform. To get to this level needs tons of money; Mercedes-Benz paid around 60 million RMB [nearly GBP 7 million] to get this level's sponsorship rights in the past…

Then they [the rights owners] will set a series of sponsorship levels based on the sponsorship rights. For example, the highest level is exclusive naming [sponsorship] rights and the exclusive naming sponsor will have a different advantage of advertising and brand promotion, such as joint logo presentation during the whole season, and a great number of advertisements through all kind of transmission channels. The lower level is designated supplies [sponsorship] rights, the brand of [designated supplies] sponsors can be introduced as an 'LPL designated brand' during the whole season. The range may cover the brand of clothing of [esports professional] players and their beverages, snacks, peripherals, even hotel and navigation APPs…

After [the rights owners] found sponsors, they will start the invitation to bid. The rights owner will send the bidding document to different suppliers [the suppliers here are different competition organisers, including the operation committee and content production companies]. Suppliers will make a rough plan of competitions, including scenic design, creative processes, such as the trash talk segment before the matches, creative techniques, such as VR [virtual reality] and AR [augmented reality] techniques. Tencent will make a final decision after a set of evaluations and comparisons…

The picked operation committee needs to start to design a detailed implementation plan for the competitions. The plan will include stage schematic diagram, material design, such as the design of staff's I.D. card, work clothes, and advertising posters, etc.; creative process, creative stream technology, list of participants which contains the host, broadcasters, show guests and staff, etc. Then the supplier will discuss each part of the plan with rights owners until they set a final plan…

After passing the implemented plan, the supplier will start to prepare everything based on the plan, such as organising the arena, participants, broadcast equipment, publicity, broadcast platform, and different material production. Also, the operation committee will report the relevant information to the public security organ…

During the [operating] process, Tencent takes the responsibility of making sure that every sponsor received the corresponding sponsorship rights. At the same time, Tencent will use its own resources to make benefits, such as hiring zero-cost broadcasters and hosts as those people have signed contracts with Tencent to be their official broadcasters and hosts in the past. [Tencent] will use the transmission channels which Tencent already has to propagandise [advertise] their competitions, such as using QQ, WeChat and their online video platforms… Besides, Tencent will charge copyrights fees from some online broadcast platform…

For the operation committee, their work is to make sure the whole process of running competitions will be safe and smooth; there are three main aspects they need to take care of: the match flow, the scene order, and the safety of the equipment…

The broadcast platform, most of them are online ones, will do relative broadcasting during the match. Some [broadcast] platforms will sign an agreement with Tencent to promise that they would broadcast a certain hour of competitions each day including rebroadcast or to promise that they will play a certain role in publicity of the competition…

The audience and fans will get relevant information on LPL or other esports competitions through different media, and they will watch the competitions afterwards. With the influence of the advertisement and publicity from the beginning, the fans and audience may buy different things. For example, topping money to their game account, buying in-game equipment, buying a match ticket, buying esports game accessories and merchandise which is produced by the rights owners and esports clubs, and buying a relevant product produced by the sponsors.

[Participant 2]

- **How to make an esports entertainment program?**

I joined the production of 'This is StarCraft II in China' Season 2 and 3, as the first season was operating in a formal esports competition style.
After NetEase and Blizzard Entertainment set the project, they tried to find sponsors for this project; unfortunately, they did not find any, so they paid everything at last. Then the rights owners made an internal discussion about choosing the operator and decided to choose NeoTV as the executive; normally there will be an open invitation of the bid, but this one did not [have one]…

Then, NeoTV will receive a rough requirement of the project from the rights owners [NetEase and Blizzard Entertainment] … the requirement concludes different things such as what kind of players they want to invite, which online broadcast platform they want to use, and the expected viewing of this program. NeoTV will start to design and pre-stage plan based on this requirement, such as offer the list of mentors which may fit this program, the sequence of the program, creative processes such as ask the players to show their other talent except for playing games, scenic design, and photography method. The rights owners will also discuss the whole process with them. After setting the final plan, NeoTV will start the preliminary preparation, such as the location of cameras, scene switching design, rehearsal of the show, and making subtitles. Then NeoTV will make the live recording of the show [this is the StarCraft II in China], and make sure the recording material can be used. They need to check if the audio and video of the recording material work well, then start to do the post-production, such as editing, tunings, and adding special effects to the show, and finally broadcast it on online broadcast platforms and other video platforms, such as Douyu.TV and Bilibili…
And the audience and fans will watch the program and give feedback to NetEase, Blizzard, and NeoTV though the broadcasting platforms. The program will also influence the fans and audience, for example, the old players may find the passion to play the game again, and the new audience may find the game interesting and buy one to try…

[Participant 3]

- **Examples of value flow around esports clubs**

The main income of esports clubs are the investment from their sponsors, sometimes rights owners will give some financial support too, such as Blizzard Entertainment used to send money to Heroes of Storm teams...
Esports clubs will use the money to keep the club running as normal—daily expenses, like paying their players and staffs, the rent and other fees, paying for advertising and propaganda, and expenditures of joining different esports competitions, such as flight, hotel, and visa fees...
After they compete in the matches, players would play a certain role in promoting the audience and fans, to raise the recognition of game players to the [esports] club and adding more potential customers for the [esports] club. The esports clubs will get some income from that. Also, the expenditure of [amateur] game players and fans will also go to sponsors' and rights owners' pocket; for example, the fans will buy the video game of the rights owners, and the product of sponsors which showed up during the matches.

[Participant 1]

- **Examples of value flow around third-party organisers**

A third-party [organised] tournaments' major interest is advertising effectiveness. Every year, big companies will have a bunch of marketing expense to use, for example, 'KOUWEIWANG' [a large food processing enterprise in China] has 800 million RMB for marketing use; in 2018, it took out 60 million RMB to advertise in the esports industry, like title sponsorship and normal advertising. While the third-party organiser is trying to get sponsorship from the sponsors, they also need to contact the rights owners to obtain authorization…
Some of them [organisers] need to pay a price such as pay for royalty, and some of them do not [need to]. For example, WESG [World Electronic Sports Games], the rights owners would like to authorise the organiser in a cooperative mode, because the size of the competition is relatively huge, that would play a certain publicity effect for the rights owners…
And then is the same cycle that audience and fans watch the match through different broadcast platforms and make [financial] contributions to the rights owners, sponsors and organisers.

[Participant 2]

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